



HURRICANE PREPAREDNESS GUIDE

FOR CONSTRUCTION OPERATORS & SITE MANAGERS



*Guidance to help protect personnel, equipment, and stormwater controls
before, during, and after tropical storms and hurricanes.*

PREPARED BY KONCEPT CARMA, INC. (KCI)

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Contents

Purpose of This Guide 3

Section 01 — Building Your Hurricane Action Plan 4

Section 02 — Understanding Storm Types 5

Section 03 — Stage-by-Stage Action Checklist 6

Section 04 — Hurricane State of Emergency 7

Section 05 — Before, During & After a Hurricane 8

Section 06 — Frequently Asked Questions..... 9

Addendum — Active Site, Storm Imminent..... 11

PURPOSE OF THIS GUIDE

Protecting Sites Before the Storm Arrives

This guide provides construction operators, site managers, and field teams with the planning framework, checklists, and reference material needed to prepare for hurricane season in Florida. It outlines critical actions to protect construction sites, personnel, equipment, and stormwater controls from damage caused by tropical storms and hurricanes.

Koncept Carma, Inc. (KCI) developed this guide to support clients across every phase of storm readiness — from pre-season planning and active monitoring through storm response, safe reentry, and recovery.

HOW TO USE THIS GUIDE

Work through Sections 1–5 during your pre-season planning meeting, then keep the Stage-by-Stage Checklist (Section 3) and the Before / During / After panel (Section 5) posted at the site trailer as an active reference throughout hurricane season.

SECTION 01 | Pre-season planning

Building Your Hurricane Action Plan

A hurricane action plan should be established well in advance for any construction site located in hurricane-prone areas. Planning reduces safety risks, prevents damage to equipment and stormwater controls, and supports an orderly shutdown if severe weather threatens the site.

The Three Planning Phases

- ☐ Phase 1 — Pre-Season Planning: Designate an action team responsible for planning, coordination, and communication. Identify equipment, materials, and site features that must be secured, stabilized, or protected.
- ☐ Phase 2 — Active Monitoring: Consistently monitor weather conditions and official forecasts throughout hurricane season. Follow National Hurricane Center advisories and updates.
- ☐ Phase 3 — Storm Response Readiness: Maintain constant awareness of a storm's projected path and potential impacts. Follow local emergency guidance and evacuate immediately if directed.

Core Elements of the Plan

- Monitor weather conditions — track forecasts, tropical outlooks, and hurricane advisories; set up real-time alerts so the team can respond quickly to changing conditions.
- Secure equipment and materials — stabilize or relocate loose materials, tools, and equipment, including scaffolding, containers, and stockpiles that could become airborne.
- Protect critical records and data — back up permits, plans, and inspection records to a secure cloud-based system to ensure access and prevent loss.
- Establish clear communication procedures — ensure employees, contractors, and subcontractors understand responsibilities, shutdown procedures, and how to stay informed.
- Develop an evacuation plan — identify routes, assembly points, and safe locations; confirm all personnel understand when and how to evacuate.
- Prepare for power disruptions — arrange backup power for critical operations, security systems, or dewatering and stormwater control measures during outages.

KCI GUIDANCE

Implementing a hurricane action plan helps protect personnel, equipment, and the construction site from potential storm impacts. Review and update the plan regularly to keep it accurate, effective, and aligned with current site conditions and responsibilities.

Reliable Tracking Resources

- National Hurricane Center advisories — [weather.gov/safety/hurricane-ww](https://www.weather.gov/safety/hurricane-ww)
- Graphical tropical weather outlook — trackthetropics.com/graphical-tropical-weather-outlook

SECTION 02 | Know the risk

Understanding Storm Types

Florida regularly experiences a wide range of severe weather, making it essential for construction operators and site managers to understand the different storm types and their potential impacts. Each type presents unique risks to worker safety, equipment, and stormwater controls.

STORM TYPE	TYPICAL CONDITIONS	PRIMARY SITE RISKS
Thunderstorms	Frequent, especially in summer; heavy rainfall, lightning, gusty winds.	Damage to erosion & sediment controls; flash flooding.
Severe Thunderstorms	Damaging winds, large hail, isolated tornadoes; possible year-round.	Structural and equipment damage; airborne debris.
Hailstorms	Less common; occur during severe thunderstorms.	Damage to equipment, temporary structures, exposed materials.
Tornadoes	Can develop quickly from severe thunderstorms or tropical systems.	Rapid, localized, high-intensity structural destruction.
Tropical Storms	Hurricane season (June–November); sustained winds, prolonged rain.	Flooding and disruption even without hurricane-strength winds.
Hurricanes	Greatest risk: destructive winds, storm surge, widespread flooding.	Extensive site damage, erosion, and environmental impacts.

WHY IT MATTERS

Understanding these storm types and their potential intensity allows construction sites to prepare appropriately, implement protective measures, and respond quickly to protect personnel, infrastructure, and stormwater management systems.

SECTION 03 | Watch · Warning · Recovery

Stage-by-Stage Action Checklist

Watch Stage — Before a Tropical Storm or Hurricane

- ☐ Document, confirm, and approve a tropical and hurricane preparedness plan for your site.
- ☐ Establish response team members and proactively assign specific duties.
- ☐ Identify materials, buildings, structures, and heavy equipment to be secured or removed.
- ☐ Ensure all BMPs are in place and properly maintained.
- ☐ Protect and stabilize all sensitive areas.

Warning Stage — During a Tropical Storm or Hurricane

- ☐ Confirm all building materials, debris, and supplies are properly secured.
- ☐ In flood-prone areas, pull inlet protection as needed.
- ☐ Properly brace structures that are considered incomplete.
- ☐ Cover all openings to construction structures to limit water intrusion.
- ☐ Secure fuel, hazardous liquids, and other equipment.
- ☐ Secure SWPPP books.
- ☐ Service and empty port-o-lets; place them face-down, away from inlets.

Recovery Stage — After a Tropical Storm or Hurricane

- ☐ Do not attempt to access any equipment until it is confirmed safe.
- ☐ Check the condition of local roadways and advise workers and subcontractors.
- ☐ Assume all downed power lines are energized — avoid them entirely.
- ☐ Repair or replace any BMPs damaged or removed during the storm, such as inlet protection.
- ☐ Review the stormwater report thoroughly and delegate corrections as needed.

SECTION 04 | Executive orders

Hurricane State of Emergency

What Is a State of Emergency?

In Florida, a State of Emergency is declared by the Governor when a hurricane or other severe weather event poses an imminent threat to life, property, or infrastructure. This declaration allows state and local agencies to act quickly, mobilize resources, and implement protective measures before, during, and after the storm.

When a State of Emergency Is Issued

- Activation of emergency response plans at the state, county, and local levels.
- Evacuation orders for vulnerable or high-risk areas to protect public safety.
- Opening of public shelters for residents who cannot safely evacuate.
- Deployment of the Florida National Guard and emergency personnel to assist with preparation, response, and security.
- Pre-positioning of equipment and supplies to support debris removal, flood response, and infrastructure protection.
- Restoration efforts, including clearing roadways, restoring power and utilities, and providing medical and public safety support.

KCI'S ROLE

KCI closely monitors all governmental announcements during severe weather, including State of Emergency notices. We ensure clients are informed and supported, providing timely formal documentation for Stormwater Pollution Prevention Plan (SWPPP) updates whenever needed.

SECTION 05 | Operational protocol

Before, During & After a Hurricane

Proper planning and clear procedures are essential to protect personnel, equipment, and construction in progress when a hurricane or tropical storm threatens. The panel below outlines key actions for each phase of a storm event.

BEFORE <i>Preparation & Site Securing</i>	DURING <i>Protect Personnel, Maintain Communication</i>	AFTER <i>Safe Reentry & Recovery</i>
▶ Monitor forecasts, tropical outlooks, and hurricane advisories from reliable sources. ▶ Brief employees, contractors, and subcontractors on hurricane procedures and OSHA requirements. ▶ Define a shutdown timeline: when work stops, when the site is secured, when it may resume. ▶ Photograph and document work in progress, equipment, materials, and installed controls. ▶ Stabilize or relocate loose materials; reinforce stormwater BMPs; protect exposed structures.	▶ Keep personnel off-site — do not remain at or return to the site during a hurricane. ▶ Follow evacuation orders and emergency guidance from local authorities immediately. ▶ Maintain situational awareness: monitor official updates and stay in contact with staff.	▶ Wait for official clearance before returning to the site. ▶ Assess hazards: flooded excavations, unstable slopes, downed lines, displaced BMPs. ▶ Account for all personnel and contractors before beginning recovery operations. ▶ Document conditions, repair stormwater controls, and clear debris before resuming work.

Planning for each phase — before, during, and after a hurricane — helps minimize risk, protect workers, maintain compliance, and support a faster, safer return to normal operations.

CLOSING GUIDANCE

Construction site operators play a critical role in protecting personnel, infrastructure, and stormwater controls when severe weather threatens. In hurricane-prone regions like Florida, advance planning, continuous monitoring, and disciplined execution before, during, and after a storm are essential.

SECTION 06 | Quick reference

Frequently Asked Questions

A fast reference for common questions about storm terminology, timing, and site-level preparedness.

Q. What is a hurricane?

A. A tropical storm with sustained winds of at least 74 mph. Hurricanes can cause significant damage from high winds, heavy rain, storm surge, and flooding.

Q. What is a tropical storm?

A. A cyclone with sustained winds between 39 and 73 mph. Tropical storms can still cause significant damage from wind, rain, surge, and flooding.

Q. How are hurricanes named?

A. Using a rotating list maintained by the World Meteorological Organization, assigned alphabetically and alternating between male and female names.

Q. Where do hurricanes form?

A. Over warm ocean waters near the equator — typically the Atlantic Ocean, Gulf of Mexico, or the Caribbean Sea.

Q. When is hurricane season?

A. June 1 through November 30 in the Atlantic Basin, which includes the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico.

Q. Watch vs. warning — hurricane?

A. A watch means hurricane conditions are possible within 48 hours. A warning means conditions are expected within 36 hours or less.

Q. Watch vs. warning — tropical storm?

A. A watch means tropical storm conditions are possible within 48 hours. A warning means conditions are expected within 36 hours or less.

Q. How can you prepare for a hurricane?

A. Stock emergency supplies, secure your site or home, and develop an evacuation plan. Stay informed and follow evacuation orders from local authorities.

Q. What should you do during a hurricane?

A. Stay indoors and away from windows. Move to higher ground if flooding occurs. If evacuating, follow your plan and local instructions.

Q. What should you do after a hurricane?

A. Watch for downed power lines and standing water. Only return once the area is deemed safe, and contact your insurance company to begin any claims.

Q. How should a site prepare beforehand?

A. Tie down equipment susceptible to high winds and remove items like cranes where possible. Secure materials, trash, tools, hazardous materials, dumpsters, portable bathrooms, and signage, and turn off power.

Q. What should a site do after a storm?

A. Assess damage with close attention to structural integrity, hazardous spills, debris, and anything that interferes with restarting the project.

ADDENDUM

ACTIVE SITE — STORM INSIDE 72 HOURS

SECTION 07 | For active sites, not just planned ones

When the Storm Is Already on the Way

Everything up to this point assumes there's runway to plan. But if you're mid-build and a storm is already inside 72 hours, the priorities change fast. This addendum is built for that moment — the crane still standing, the pond half full, the trench still open. Read it alongside the Watch / Warning / Recovery checklist in Section 3, not instead of it.

Cranes and Lifts

Cranes and lifts are outside our lane at KCI — we're stormwater consultants, not crane operators — but they're too important to leave off this list. If your site has a tower crane, man-lift, or boom lift, securing it needs to be part of the pre-storm plan well before the storm is inside 72 hours.

- ☐ Loop in the crane operator, rigging contractor, or equipment manufacturer early — they know the correct securing procedure for that specific machine, and it's not something to guess at.
- ☐ Confirm someone with the authority and training to make crane and lift decisions is reachable, not just listed on a plan.
- ☐ Get lifts and mobile equipment down, powered off, and secured, following the manufacturer's or contractor's guidance.

Take Down Anything That Can Catch Wind

Debris netting, shrink-wrap, banners, mesh screening — on paper these are minor site items, but in a hurricane they're sails, and they take siding, scaffolding, and sometimes each other down with them. If a structure isn't finished, assume the wind will find every gap.

- ☐ Remove or drop debris netting, shrink-wrap, banners, and mesh screening wherever it can safely come down.
- ☐ Brace incomplete formwork, shoring towers, and standing rebar cages.
- ☐ Decide early whether a scheduled pour needs to be delayed — wet concrete and a hurricane don't mix.
- ☐ Lower or dismantle scaffolding where practical; tie off whatever has to stay up.

Water Has to Go Somewhere

This is the part general contractors sometimes forget and stormwater people never do. A detention pond that's already full has nowhere to put the next eight inches of rain, so draw it down ahead of time if you can. Open trenches and excavations are a liability in two directions — a falling hazard and an erosion source — so backfill or stabilize what you can and pull the trench boxes.

- ☐ Pre-storm drawdown of detention and retention ponds to open up capacity before the rain arrives.
- ☐ Backfill or stabilize open trenches and excavations; remove trench boxes that aren't actively in use.
- ☐ Double-stake silt fence and reinforce perimeter controls — don't just confirm they're "in place."

Fuel, Chemicals, and Containment

A generator or fuel tank that shifts or floods turns a storm recovery into an environmental incident. Check the containment, and physically anchor anything that could move.

- ☐ Inspect secondary containment on fuel tanks and generators; anchor anything that could shift or float.
- ☐ Move hazardous materials above the expected flood elevation, and stage spill kits somewhere accessible after the storm — not locked in a flooded conex box.

Trailers, Records, and Anything With a Screen

The job trailer is usually the last thing anyone thinks about because it isn't exciting, but it holds your permits, your SWPPP book, and whatever electronics didn't get backed up. If it can flood or blow open, empty it out.

- ☐ Evacuate or elevate job trailers; unplug and bag laptops, tablets, and field electronics.
- ☐ Confirm SWPPP books, permits, and inspection logs are backed up somewhere off-site and reachable from a phone — not just a filing cabinet in the trailer.

People — Beyond the Roster

A hurricane plan on paper means nothing if you can't actually reach your crew. Build a real phone tree, not just a spreadsheet with numbers on it, and have a backup way to communicate if cell towers go down.

- ☐ Set up a phone tree and headcount procedure covering every employee, contractor, and sub on-site, with one named person responsible for confirming everyone's accounted for.
- ☐ Have a backup communication method ready — radios, a satellite phone, a group text plan — in case cell service goes down, which it often does.

Vehicles and Mobile Equipment

Simple, but easy to forget in the rush: get vehicles to high ground, clear of trees and anything that can fall on them, and fill the tanks. You'll want that equipment mobile the moment it's safe to move again.

- ☐ Stage vehicles and mobile equipment on high ground, clear of trees and structures.
- ☐ Top off fuel tanks before the storm — fuel is often hard to find for days afterward.

Don't Miss the Regulatory Clock

This is the piece that gets missed when everyone's focused on physical safety, and it's the one that can turn into a compliance problem later. Line up a debris and recovery contractor before the storm, not after, when everyone else is calling the same three companies. And remember: once a qualifying rain event of a half-inch or more hits, the NPDES clock starts.

- ☐ Pre-arrange a debris removal and recovery contractor — don't wait until after the storm to start calling.
- ☐ Know the trigger: a rain event of 0.5 inches or more requires an NPDES inspection within 24 hours. Build that into the recovery timeline, not as an afterthought.
- ☐ If the SWPPP needs amending after the storm, notify the permitting authority or water management district promptly.

Before Anyone Goes Back In

Clearance from local authorities gets everyone back to the area. It doesn't mean the structure is safe. Get sign-off from the engineer of record before anyone reoccupies an incomplete structure, and look past the obvious hazards.

- ☐ Get engineer-of-record sign-off before reoccupying any incomplete structure.
- ☐ Watch for what's not obvious — hidden excavation edges, contamination, and, in Florida, wildlife that's moved into standing water.

BOTTOM LINE

None of this replaces judgment on the ground. The checklists give you a floor, not a ceiling — if something about your site doesn't fit the list, handle it anyway. This addendum and the Section 3 checklist are meant to be read together in the 72 hours before a storm, not filed away until next season.

PREPARED. PROTECTED. RESILIENT.

Koncept Carma, Inc. (KCI)

Environmental Compliance & Stormwater Consulting
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This guide is not intended, and must not be relied upon, as a complete, guaranteed, or life-safety-certified plan. It does not identify or address every hazard that may exist at any given site. Every construction site presents its own risks based on location, phase of construction, workforce, equipment, and surrounding environment, and no general publication can account for all of these variables. Conditions during an actual storm event may differ substantially from the scenarios described here, and severe weather remains inherently unpredictable. This guide does not guarantee the safety of any person, structure, or property, and following it does not eliminate risk of injury, loss of life, property damage, or environmental harm.

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