



GRADIENT
PLANNING

Incident Management Planning

How does your utility compare?


Marian Long, P.E.
Principal
Gradient Planning, LLC

Kate Novick, P.E., CSP
Managing Director
Gradient Planning, LLC

Introduction

- **Mark of our times-** The new normal
- **The challenge-** As a critical infrastructure, the water sector bears a significant burden to continue operations, even during events that require extraordinary acts of resiliency
- **The proactive response-** Risk management, increased preparedness, strengthened partnerships and mutual aid, and many others



A close-up, shallow depth-of-field photograph of a stack of papers on the left side of the frame. The papers are white and appear to be part of a binder, with some showing small metal fasteners. To the right, a wire binder is visible but out of focus. The background is a plain, light-colored surface.

We have a plan.

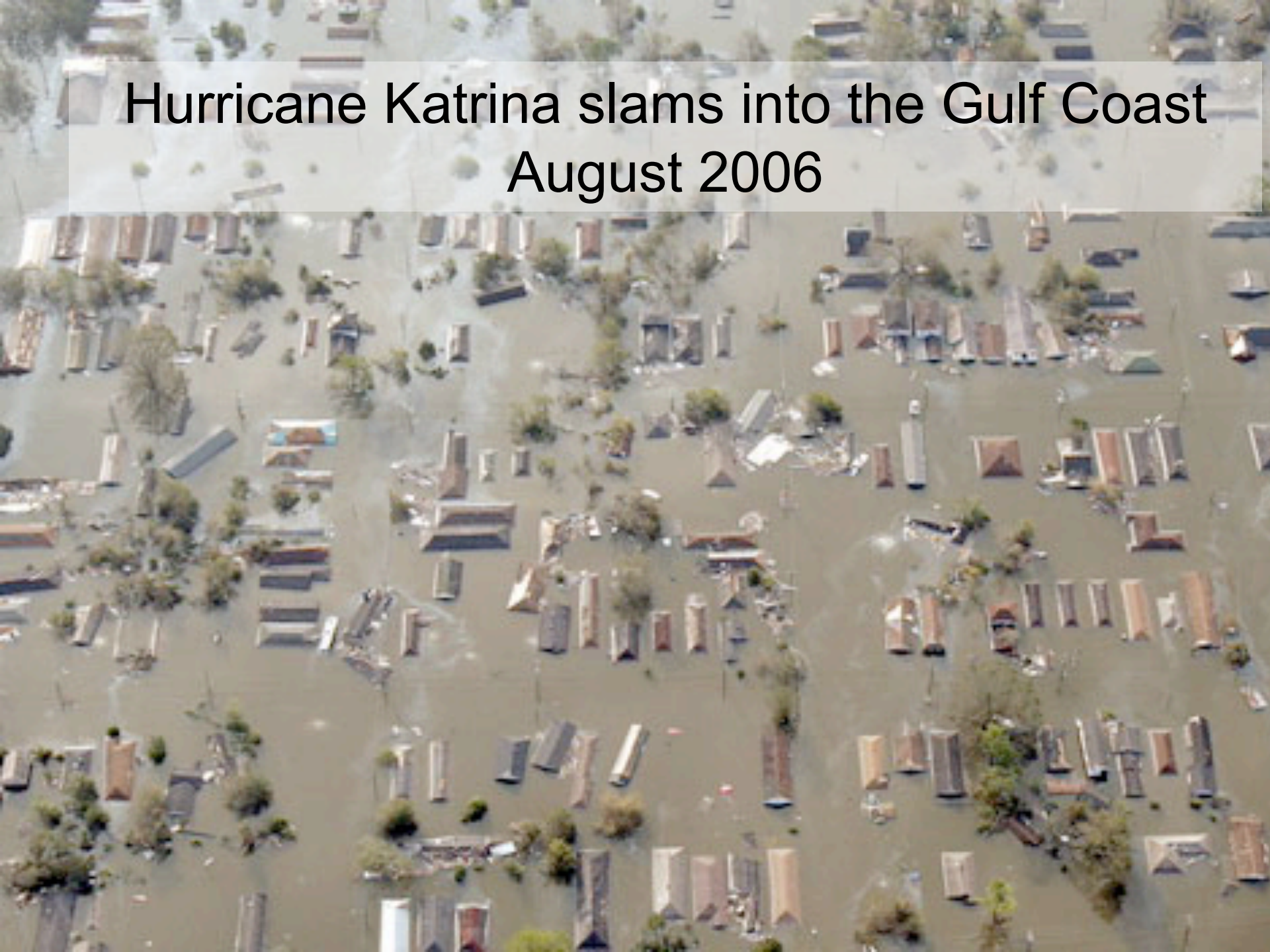
BP contingency plan for dealing with oil spill was riddled with errors

Document approved by US government listed dead scientist as expert and said oil was unlikely to ever reach shore



i Contract workers from BP use skimmers to clean oil from a marsh in Louisiana. BP's plan stated: 'Due to the distance to shore and the response capabilities that would be implemented, no significant adverse impacts are expected'. Photograph: Win Mcnamee/Getty Images

Hurricane Katrina slams into the Gulf Coast August 2006



A FAILURE OF INITIATIVE

**Final Report of the Select Bipartisan Committee to Investigate
the Preparation for and Response to Hurricane Katrina**

U.S. House of Representatives

From The 9/11 Commission Report:

“The most important failure was one of imagination.”

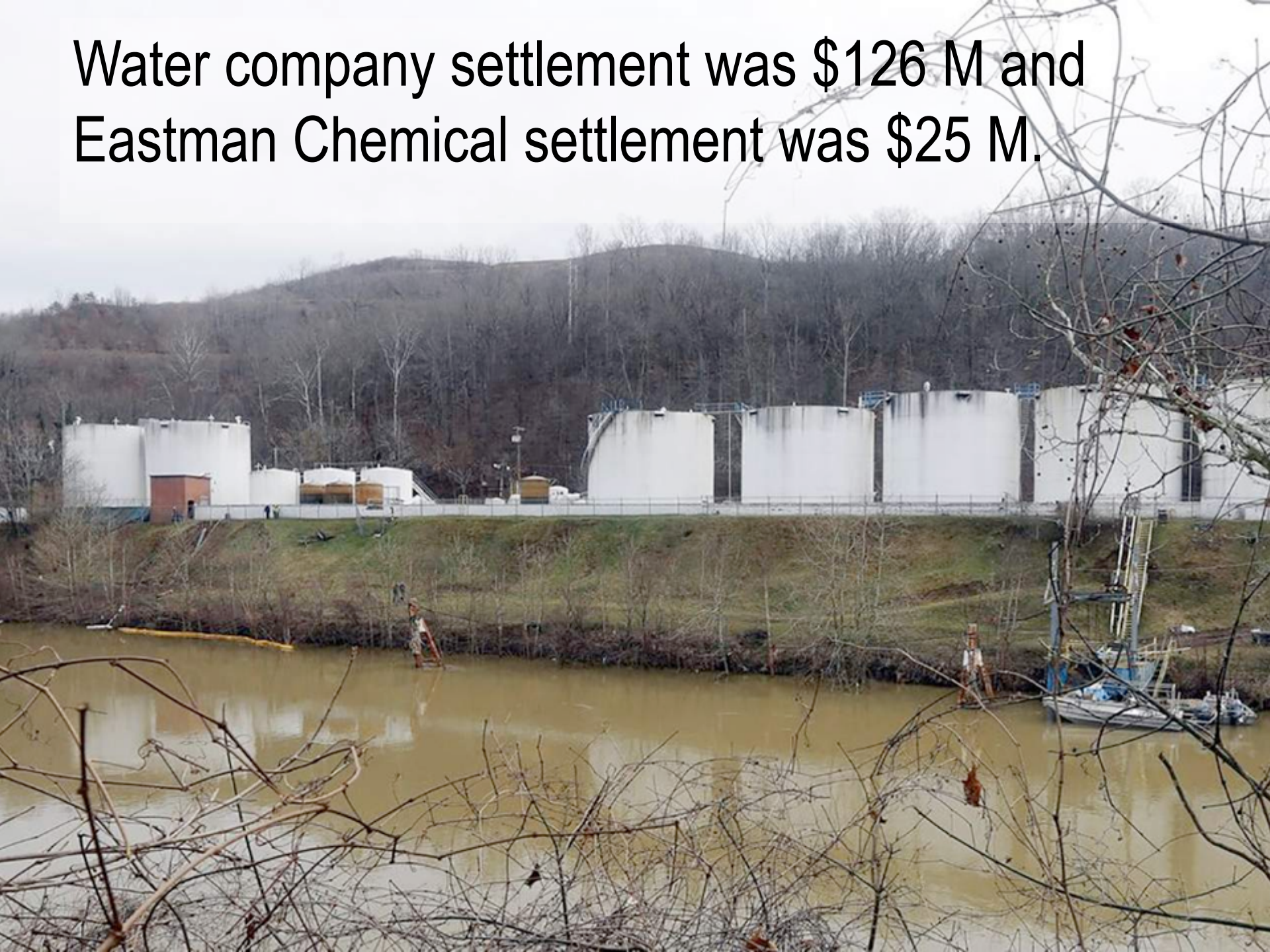





Snyder Concedes Flint is His "Katrina," a Failure of Leadership

The Atlantic, January 2016

Water company settlement was \$126 M and
Eastman Chemical settlement was \$25 M.





“We never thought it would happen here.”

- West Virginia American Water, chemical spill in the Elk River
- Colorado Springs Water Utility, 2013 record floods
- Ocean City, NJ; Staten Island, NY, etc... 2012 Hurricane Sandy
- Joplin, MI, 2011 EF-5 Tornado
- Saint Louis, MO, 2011 record floods
- Madison, CT, 2011 Tropical Storm Irene
- West Hartford, CT, 2011 Winter Storm Alfred
- Bridgeport, CT, 2011 Tropical Storm Irene
- Sturbridge, MA, 2011 EF-3 Tornado
- Alamosa, CO, 2008 Salmonella outbreak
- City of New Orleans, Louisiana, 2005 Hurricane Katrina
- Warren County, Mississippi, 2005 Hurricane Rita
- New York City, NY, 2001, Terrorism Bombing of World Trade Center
- Fukushima Daiichi, Japan, 2011, Nuclear Power Plant Flooding and Failure

- Iran, Indonesia, and India, 2010 STUXNET Computer Worm

- And on and on

complacency

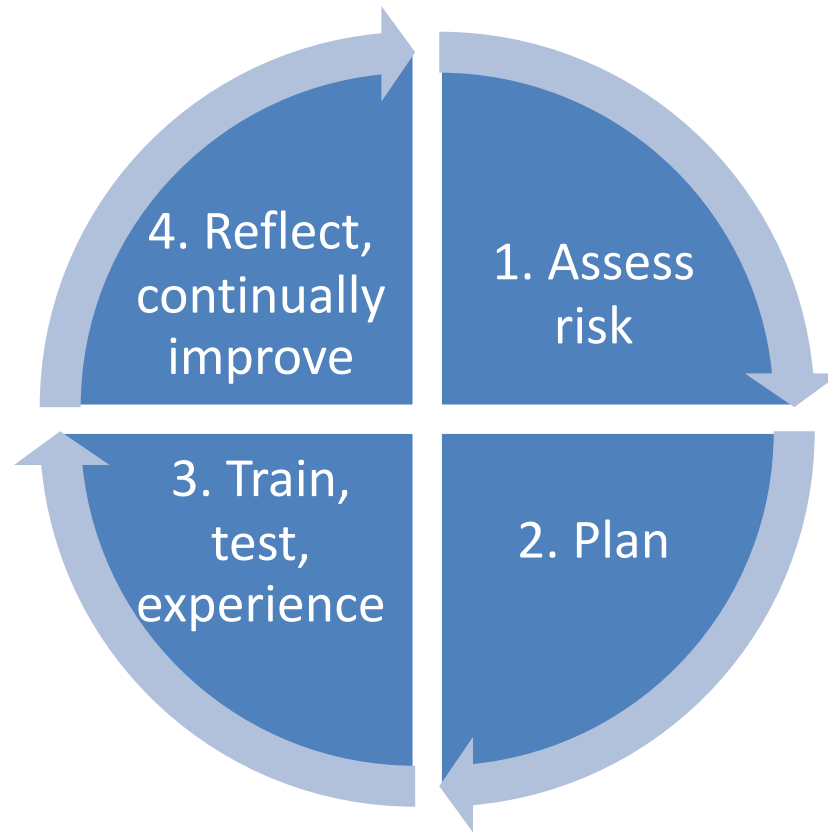
noun | com·pla·cen·cy | \kəm-'plā-sən(t)-sē\

- ① : self-satisfaction especially when accompanied by unawareness of actual dangers or deficiencies <When it comes to safety, *complacency* can be dangerous.>
- ② : an instance of usually **unaware** or uninformed self-satisfaction

Fortunately, we have resources...

- AWWA's G440-11 Standard, Emergency Preparedness Practices
- NFPA Standard 1600, Disaster/Emergency Management and Business Continuity, 2016
- AWWA's M19 Emergency Planning for Water Utilities, 2001
- Business Continuity Planning for Water Utilities Guidance Document and Toolbox, 2013
- AWWA's J-100-10 Standard, Risk Analysis and Management for Critical Asset Protection
- And many more...





An overhead view of a meeting with six people seated around a light-colored table. They are looking at various documents and papers. One person is pointing at a document, and another is writing on a yellow sheet. The scene is lit from above, creating soft shadows.

Per G440 Standard, does your plan:

- ① Document an explicit commitment?
- ② Embody a preparedness culture?
- ③ Define roles and expectations?
- ④ Rely on a risk assessment?
- ⑤ Include ICS and NIMS?
- ⑥ Include strategies for effective communication?
- ⑦ Have a robust training and exercise program?
- ⑧ Identify pre-arranged partnerships?

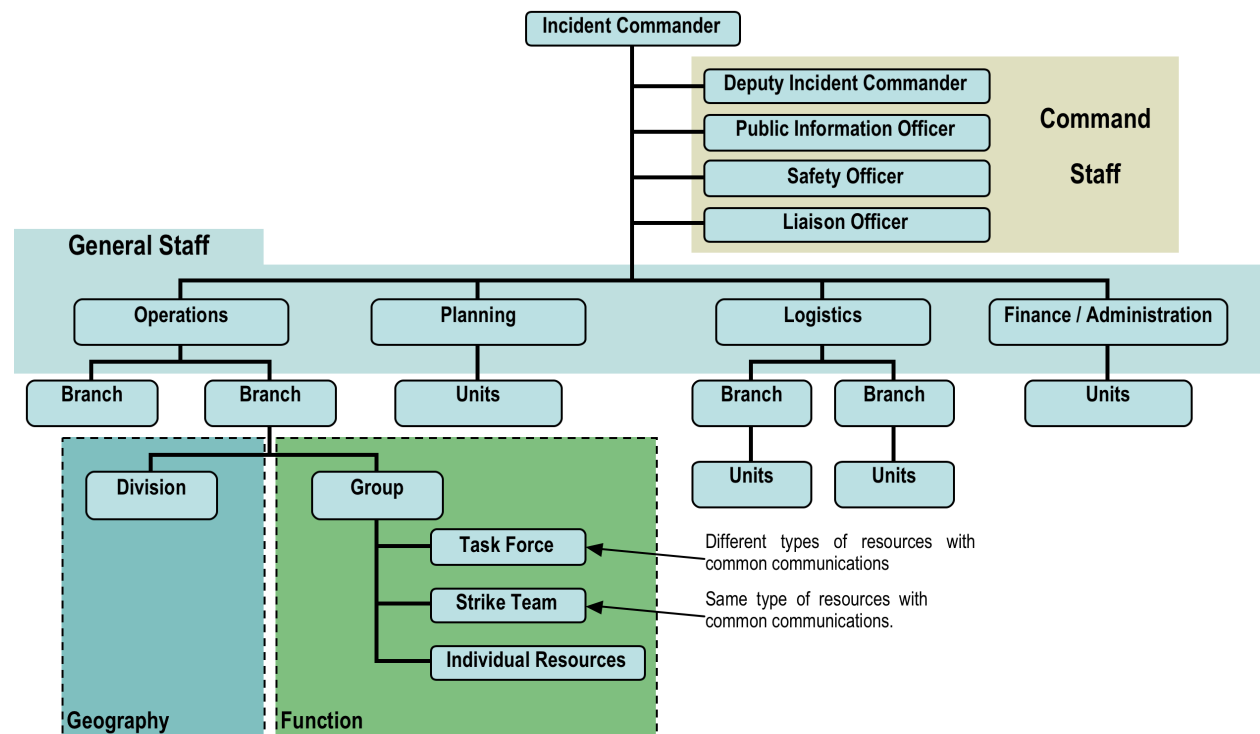
Critical NFPA 1600 Requirements You Must Not Miss

- ① Have an incident management plan/system in place to direct, control, and coordinate response and recovery operations
- ② Have a crisis communication plan/system in place to deal with the media and others before, during, and after an event
- ③ Have an advisory committee in place that meets regularly



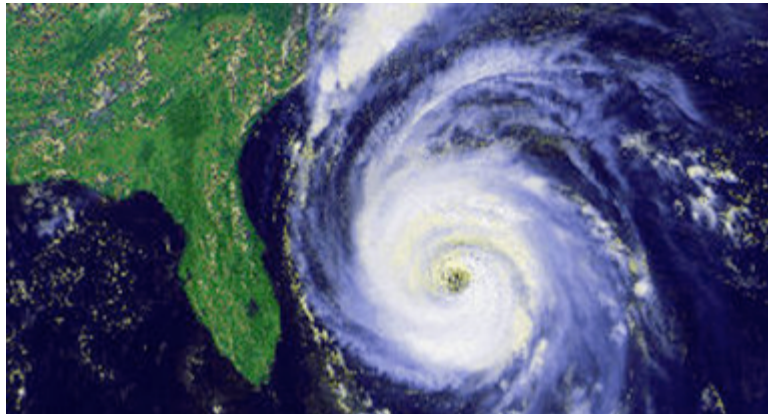
Incident Command System

- Standardized, on-scene, all-hazards incident management
- Enables coordinated response
- Establishes common processes for planning and managing resources
- Integrates all resources within a common organizational structure

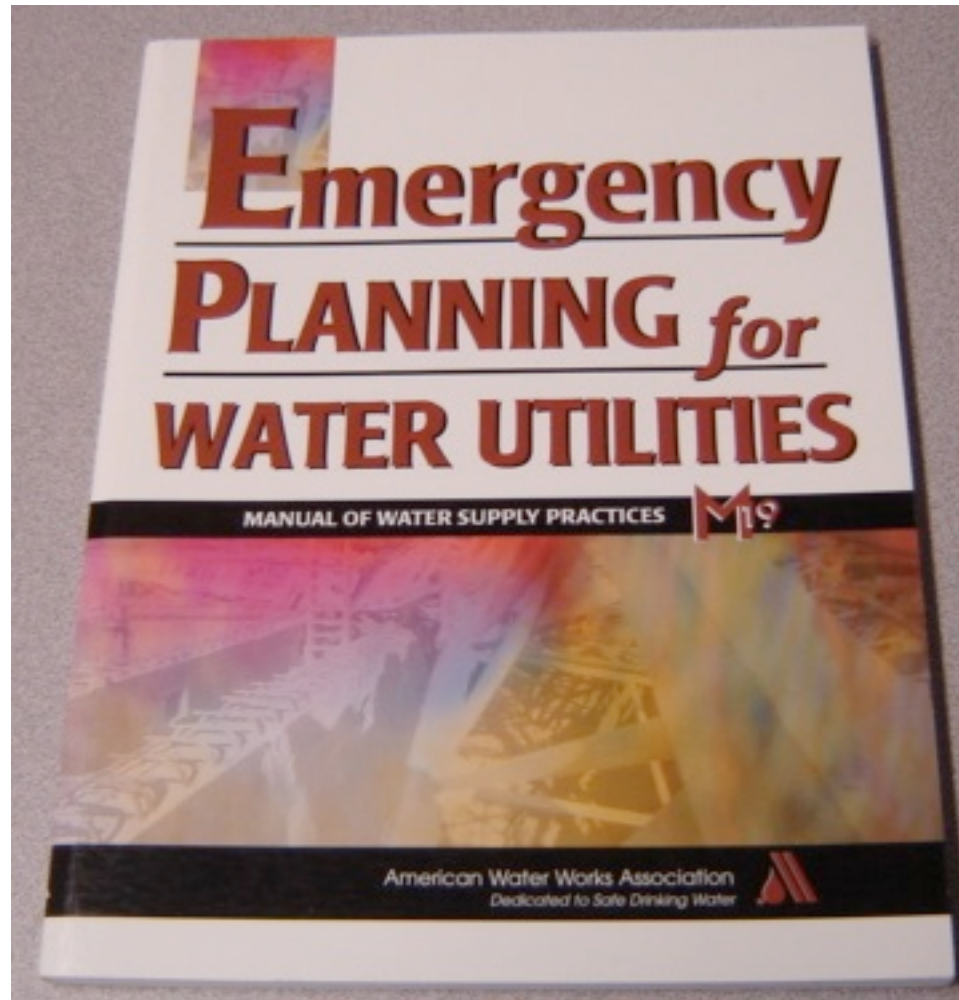


When is ICS Used?

- Natural hazards
- Technological hazards
- Human-caused hazards
- Planned events



AWWA's M19



A Business Continuity Plan/Program (BCP)

- ① Business Impact Analysis
- ② A plan or collection of plans to continue business during interruptions and disruptions and recover IT, Communications, Facility, Materials and Supplies, and Staff




BCP Guidance and Template for Small Water and WW Utilities (2013)




BCP Document Library

Actions ▾

Type	Name	Modified	<input type="checkbox"/> Modified By
	WaterRF - BCP Guidance Document	6/18/2013 8:05 AM	Mary Smith
	WaterRF - BCP Template	6/18/2013 8:05 AM	Mary Smith

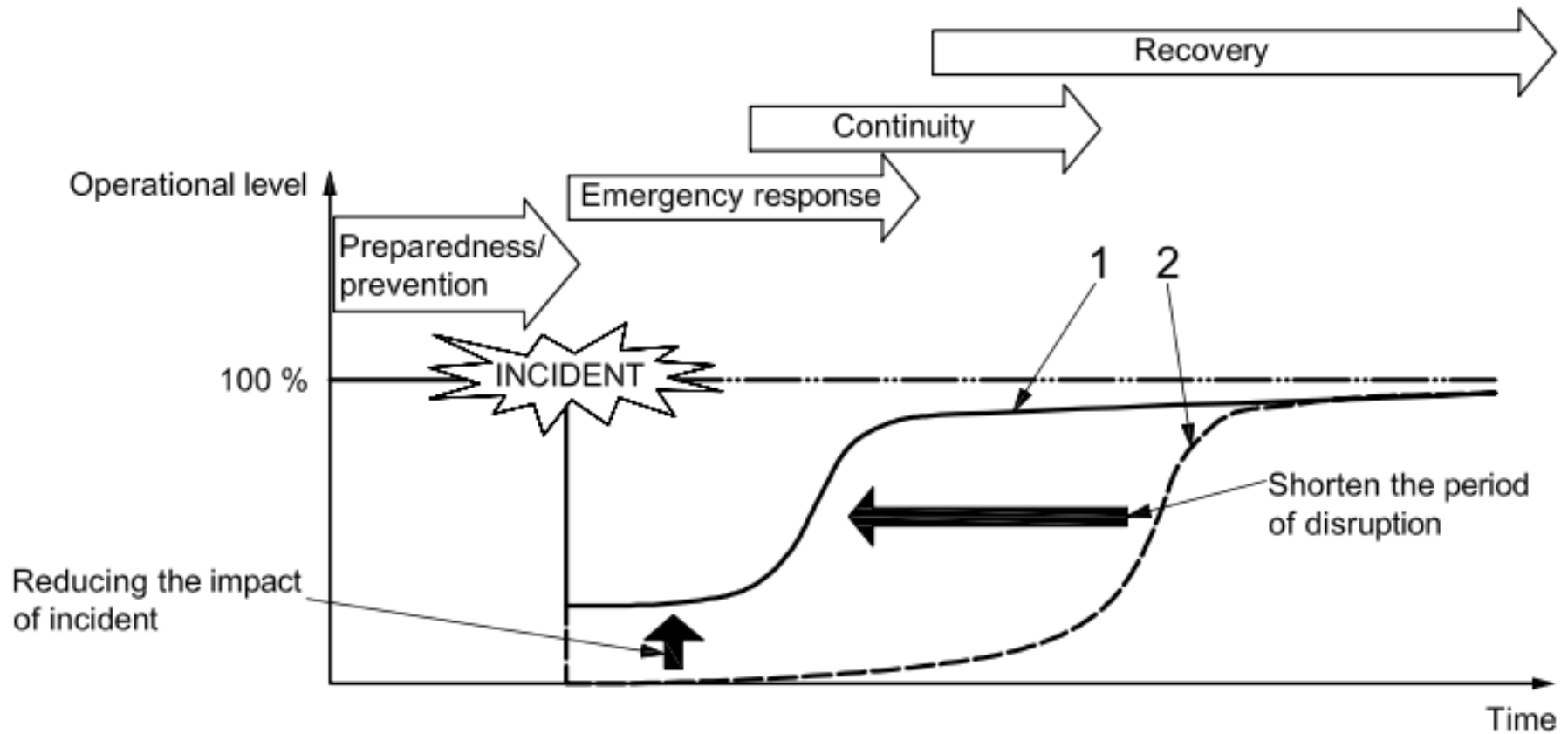
Links

Actions ▾

Type	Edit	URL	Notes
		WaterRF - BCP Training Video	

Concept of Preparedness Program Diagrammed by ISO 22399 2007-12-01

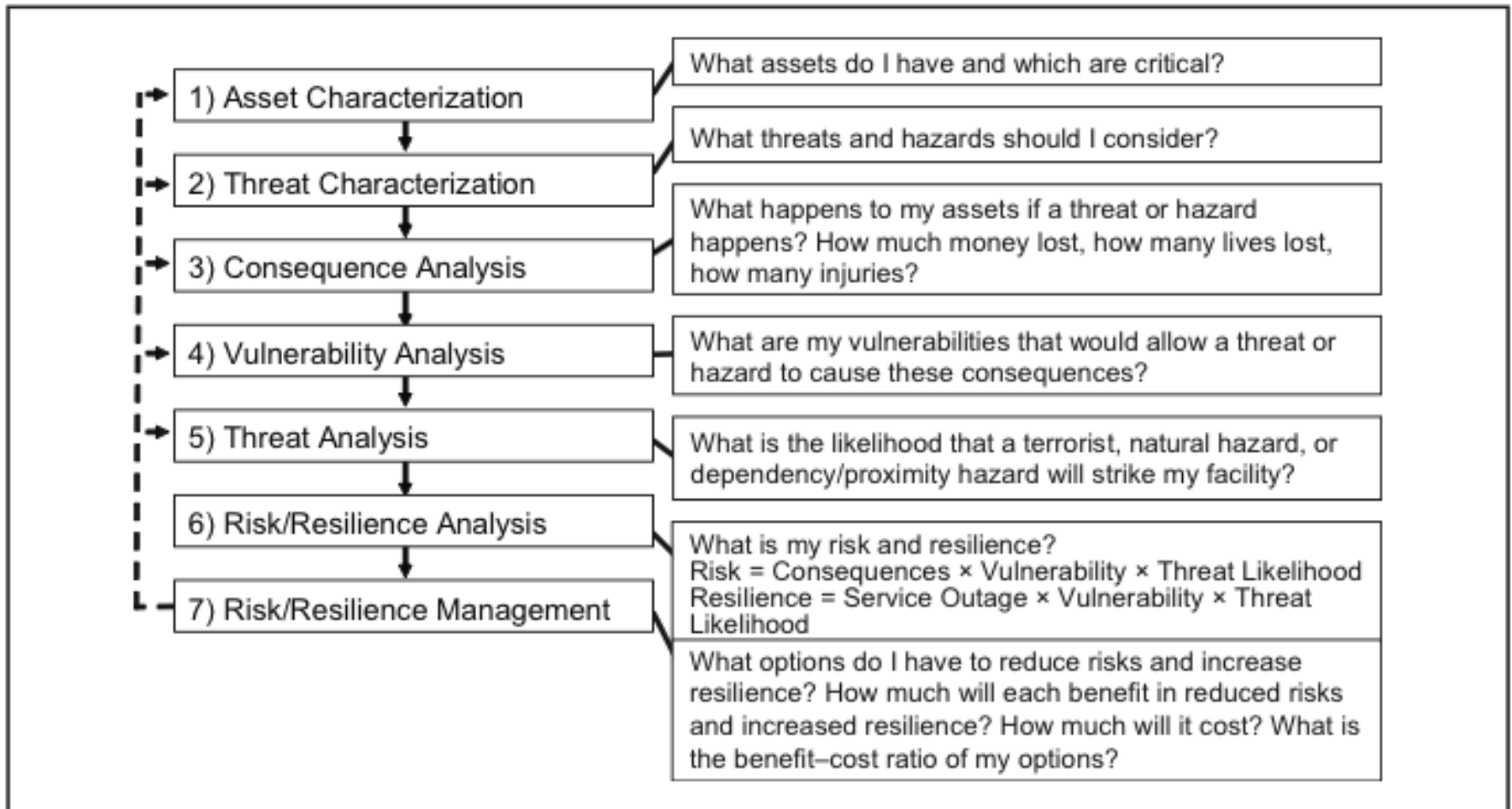
Societal security- Guidelines for incident preparedness and operational continuity management



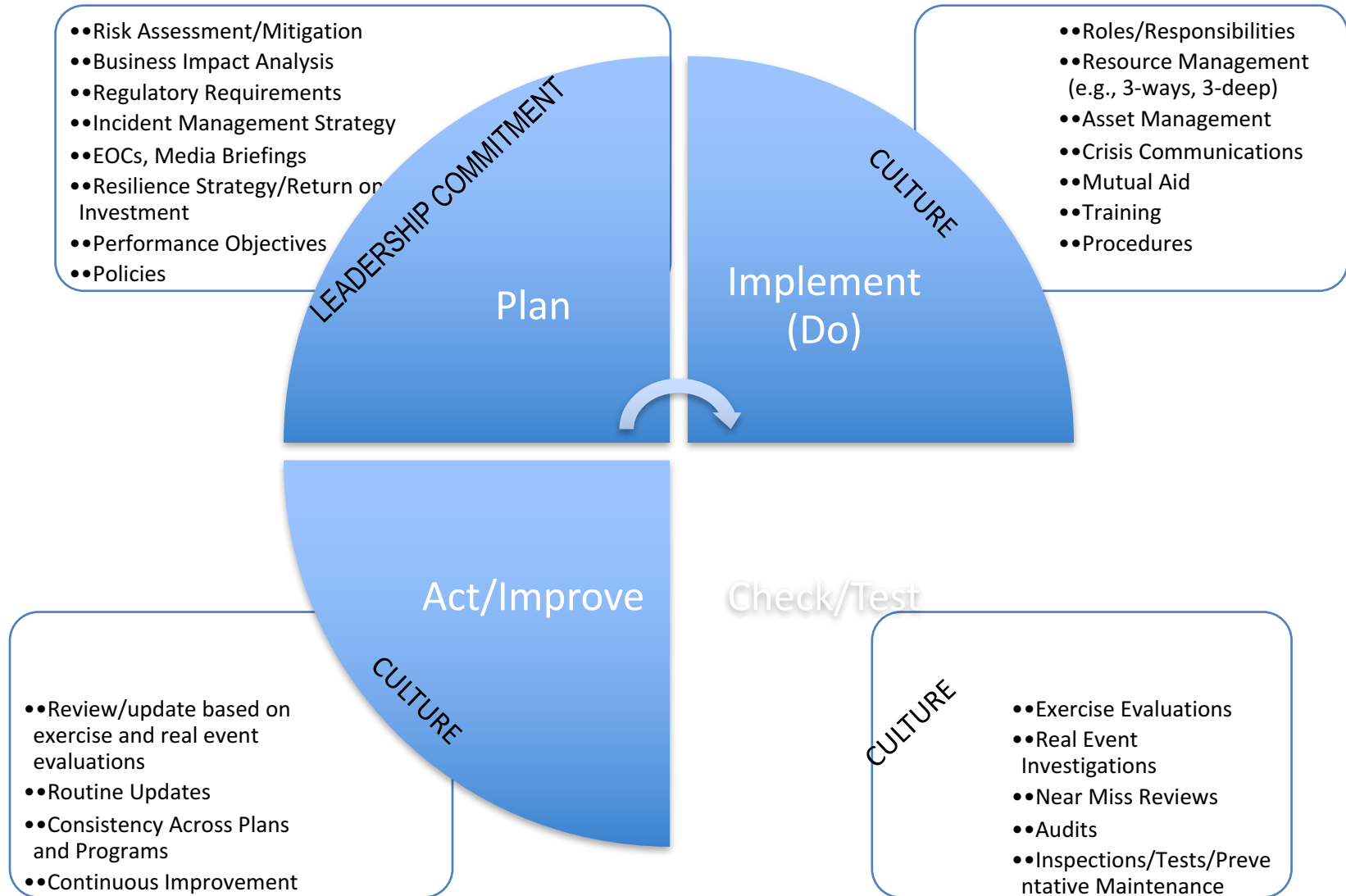
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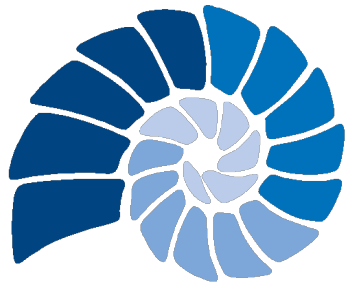
- 1 after introduction implementation of IPOCM
- 2 before introduction implementation of IPOCM

J-100: 7-Step RAMCAP Process



Plan-Do-Check-Act Cycle Applied to Emergency Preparedness and Business Continuity





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Kate Novick, P.E., CSP

Managing Director

Gradient Planning, LLC

knovick@gradientplanning.com

860.402.6597