

Drinking Water and Wastewater Emergency Management Workshop

Tuesday 9/24/13

ConCon A&B

MDEQ Constitution Hall

Water Cop

- Water cop...serve and protect

Introduction

- Authority defines funding...separate dw/ww
 - Federal SDWA/CWA and state laws and rules
- French bleue...white fish and sturgeon spawning
- German engineer attorney skeptic
- Iraq
- System costs...don't need significant figures...xx thousands, millions, billions
- Cost proportional to pipe diameter inch ?
- Dollars per square mile in the city: sanitary vs drinking water

Introduction II

- Demand on the dw side...economic indicator
- Flow on the ww side...economic indicator
- chair...chairs...sand box...sand boxes...alternate power...10 States Stds ...generator fuels ...SCADA/computers ...fish spawning in Detroit River-whitefish/sturgeon...World Trade Center 1993 & 2001 due diligence lawsuits...accredited hospitals...sr Israeli Water engineer...Genesis...J Edgar Hoover 1941...London 1848...Dr. Simon Report..water quality and quantity

Our Introduction



COL. EDWARD D. RICH
July 1911 - February 1946



Ignorant men may sneer at the pretensions of sanitary science; weak and timorous men may hesitate to commit themselves to its principles, so large in their application; selfish men may shrink from the labor of change, which its recognition must entail; and wicked men may turn indifferently from considering that which concerns the health and happiness of millions of their fellow-creatures; but in the great objects which it proposes to itself, in the immense amelioration which it proffers to the physical, social, and indirectly, to the moral condition of an immense majority of our fellow-creatures, it transcends the importance of all other sciences; and in its beneficent operation, seems to embody the spirit, and to fulfil the intentions, of practical Christianity.”*

* "Report on the Sanitary Condition of the City of London," p.38 by Dr. John Simon, Officer of Health, presented Nov. 6, 1849.

Greatest Medical Milestone since 1840 [166 yrs]...British Medical Journal

- Improved sewage disposal and clean water supply systems, which have reduced diseases such as cholera, was the overwhelming favorite of 11,341 people worldwide who voted in a 2006 survey conducted by the British Medical Journal.

It's Nothing New

“It has long been recognized that among the public utilities, water supply facilities offer a particularly vulnerable point of attack to the foreign agent, due to the strategic position they occupy in keeping the wheels of industry turning and in preserving the health and morale of the American Populace.” (emphasis added)

J. Edgar Hoover, 1941

4,000 years ago...book of Genesis

- Senior Israeli Water System engineer...in the book of Genesis: do not allow your enemy to poison your well

Point of Law.com

- Breaking: NY top court reverses ludicrous 1993 WTC bombing civil liability verdict
- By [Ted Frank](#) on September 22, 2011 10:55 AM

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I've [long criticized](#) a silly judgment in New York state court that the Port Authority was 68% responsible for the 1993 terrorist bombing of the World Trade Center, potentially putting them on the hook for \$1.8 billion in damages.

- The good news is that today the New York Court of Appeal struck down that decision, reversing lower courts; the bad news is that the decision was only 4-3, and on the narrow ground of governmental immunity under New York statutes, rather than any sort of rational interpretation of the principle of causation. [[NY Court of Appeals](#) via [Bashman](#); [earlier @ WSJ](#)]

Homeland Security Presidential Directives

- **HSPD-5: Management of Domestic Incidents**
 - National Incident Management System (NIMS)
 - National Response Plan (NRP)
- **HSPD-7: Critical Infrastructure Identification, Prioritization and Protection (replaces PDD-63)**
 - National Infrastructure Protection Plan (NIPP)
 - Sector Specific Plans (SSP)
- **HSPD-8: National Preparedness**
- **HSPD-9: Defense of Ag & Food**
- **HSPD-10: Biodefense for the 21st Century**
- **HSPD-12: Common Identification Standard**
- **HSPD-20: National Continuity Policy**

NATIONAL INFRASTRUCTURE PROTECTION PLAN 2009 (PREFACE)

Risk in the 21st century results from a complex mix of manmade and naturally occurring threats and hazards, including terrorist attacks, accidents, natural disasters, and other emergencies. Within this context, our critical infrastructure and key resources (CIKR) may be directly exposed to the event themselves or indirectly exposed as a result of the dependencies and interdependencies among CIKR.

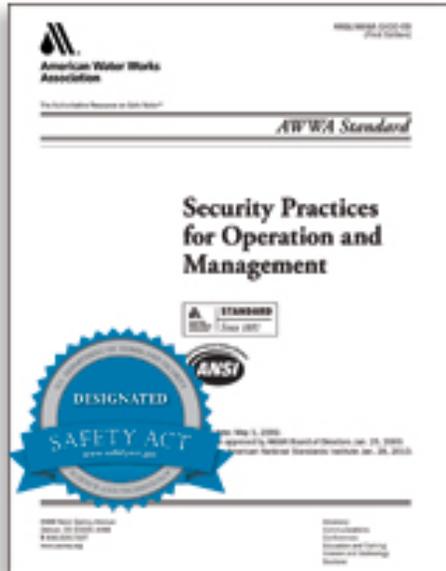
PPD-21 (February 12, 2013)

- Presidential Policy Directive on Critical Infrastructure Security and Resilience
- Advances a national unity of effort to strengthen and maintain secure, functioning, and resilient critical infrastructure
- The owner is in the best position to manage risks in their operations and to their assets and develop strategies to make them more secure and resilient against physical and cyber threats

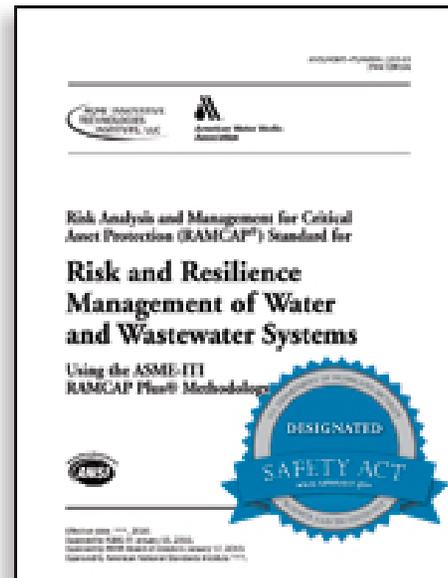
AWWA STANDARDS

To assist utilities in meeting their responsibilities, AWWA has developed these standards:

- AWWA G430-09; Security Practices for Operation and Management
- AWWA J100-10; Risk and Resilience Management for Water and Wastewater Systems
- AWWA G440-11; Emergency Preparedness Practices



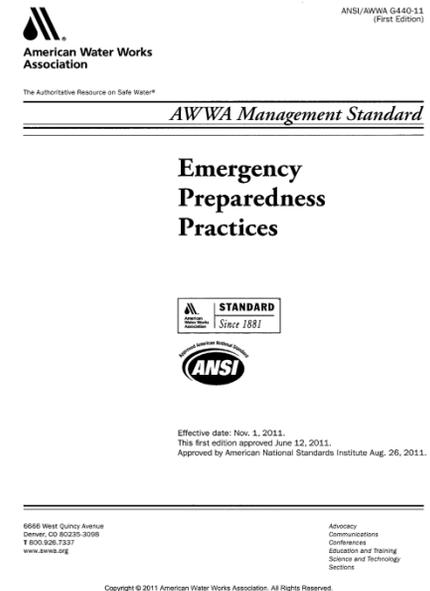
G430-09



J100-10

AWWA

G440-11



STANDARDS

SAFETY ACT DESIGNATION

- The Support Anti-terrorism by Fostering Effective Technologies Act of 2002 (“SAFETY Act”) was enacted by Congress in the wake of the terrorist attacks on September 11, 2001.
- The SAFETY Act was created, in part because of the extraordinarily large liability entities might face if a terrorist attack occurs despite deployment of anti-terrorism security measures already in place.
- Congress designed the SAFETY Act as an incentive for the creation and deployment of qualified anti-terrorism technologies and services.

SAFETY ACT DESIGNATION

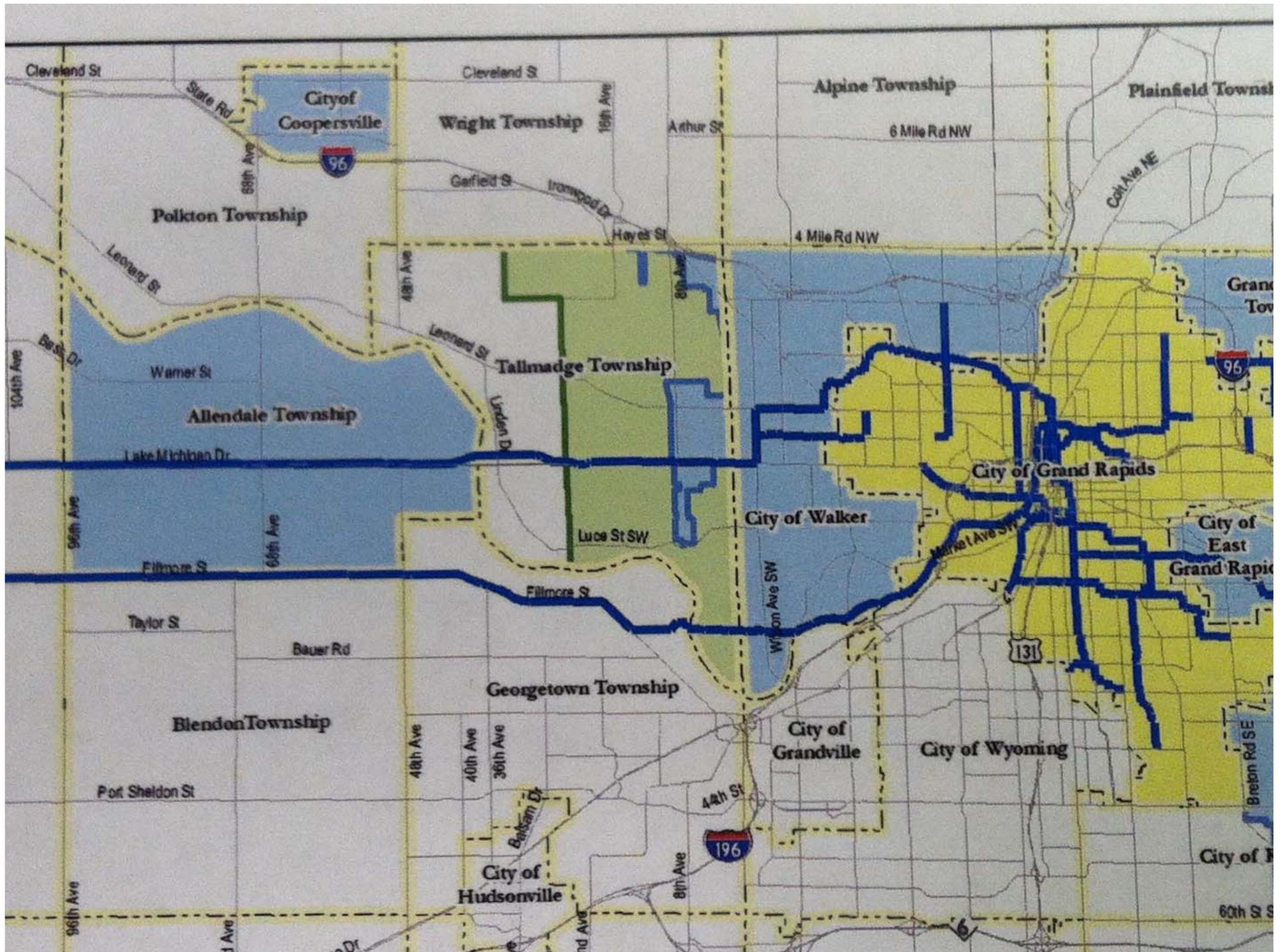
The American Water Works Association standards [G430](#) and [J100](#) have been awarded SAFETY Act designation by the US Department of Homeland Security.

The designation carries important liability protection for the Association and for utilities that properly implement these standards.

SAFETY ACT DESIGNATION

DHS has concluded that the proper utilization of either of these Standards will assist in effectively mitigating acts of terrorism from occurring at water facilities.

Stakeholders are also assured that, with proper use of the Standards, they are protected from third-party lawsuits should an act of terrorism occur involving a Standard-identified vulnerability.



*10 STATES
STANDARDS
(GLUMRB)*



Ten States Standards

- **GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD (GLUMRB)**
- Illinois - Indiana - Iowa - Michigan - Minnesota - Missouri - New York - Ohio - Ontario - Pennsylvania - Wisconsin
- **of State and Provincial Public Health and Environmental Managers**

- The Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (GLUMRB) in 1950 created a Water Supply Committee consisting of one associate from each state represented on the Board. A representative from the province of Ontario was added in 1978. The term state shall mean a representative state or the Province of Ontario.

Alternate Power

- Ten States Standard for alternate electrical energy:
The following is from Ten States Standards, Recommended Standards for Water Works (2012 Edition)

Part 2.6 STANDBY POWER

- Dedicated Standby power shall be required by the reviewing authority so that water may be treated and/or pumped to the distribution system during power outages to meet the average day demand. Alternatives to dedicated standby power may be considered by the reviewing authority with proper justification.
- As you can see, the old dual feed electrical service as an alternate power source has been revised.

- MICHIGAN SAFE DRINKING WATER ACT
- 1976 PA 399, as Amended,
- MCL §§325.1001 to 325.1023
- and the
- Administrative Rules,
- Supplying Water to the Public
- R 325.10101 to R 325.12820

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- **R 325.11206 Interruption of power service; applicability; compliance date.**
- Rule 1206. (1) A type I public water supply that provides service to 100 or more living units shall provide a means to continuously supply finished water to the entire distribution system during periods when the normal power service is interrupted. A group living facility with 200 or more beds based on full Administrative Rules Promulgated under the Michigan Safe Drinking Water Act
- 174 capacity is equivalent to 100 or more living units and shall comply with this rule. Examples of a group living facility include a health care facility, correctional facility, and group home.
- **(2) *Both of the following type I public water supplies that existed before the effective date of this rule are not required to comply with this rule until January 1, 2016: (emphasis added)***
- (a) Those that serve 100 or more living units and that serve fewer than 200 individuals.
- (b) Those that serve 100 or more living units and that serve facilities which are licensed annually by the state including manufactured housing communities and health care facilities.
- History: 1979 AC; 2009 MR 23, Eff. Dec. 4, 2009.

MDEQ Dual Electrical Feed OK

- Pat Cook, MDEQ 10 States Standard representative, says it is still our practice to allow dual electrical feed as “a means to continuously supply finished water” under R325.11206 of the rules.

- It doesn't matter what shirt we have on...we all support each other

- We'd be a 3rd world country without drinking water

- We'd be dirty without drinking water

Arterial flow – drinking
water system

Venous flow – sanitary
sewers

All-Hazards



Natural

- Tornado
- Flood
- Wildfire
- Ice
- Influenza

Technological / Man-Made

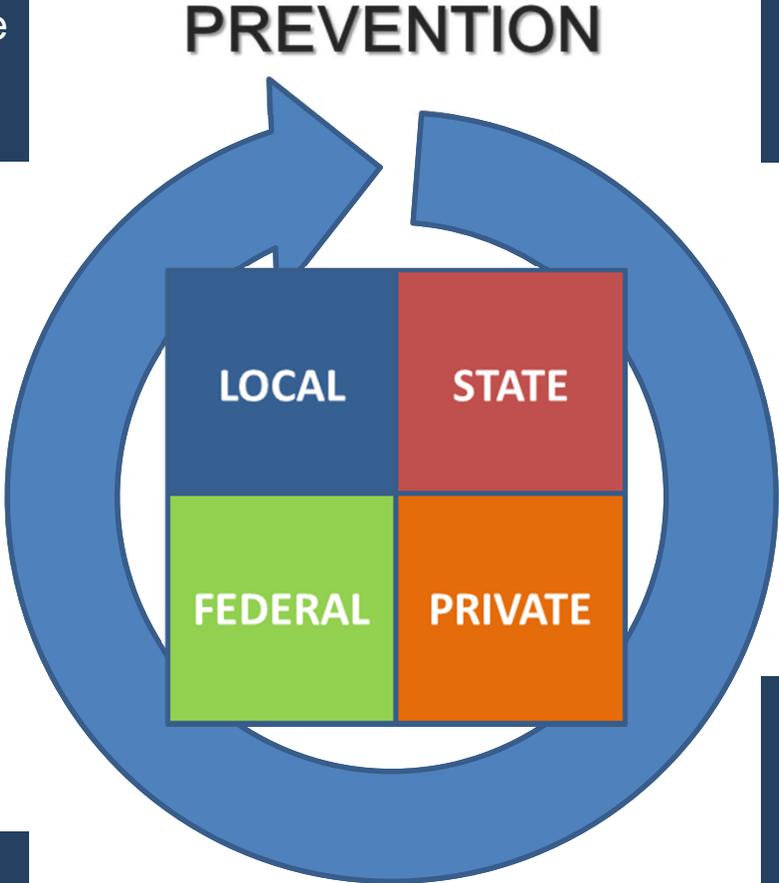
- Chemical Spill
- Crime / Terrorism
- Blackout
- Radioactive
- Cyber Hacking

Mitigation

Deflect or minimize negative impact that cannot be prevented

Preparedness

Assumes a risk will occur then allocates resources to reduce its impact



- Deals with aftermath
- Long term needs of victims

Recovery

- All the steps necessary to make it through an actual emergency
- Surviving first moments
- Caring for victims
- Managing event

Response

