

# The NSSI, US Resilience System & Pandemic Preparedness

How would our nation prepare and respond if it  
were facing a potential severe pandemic wave  
within 90 to 120 days?

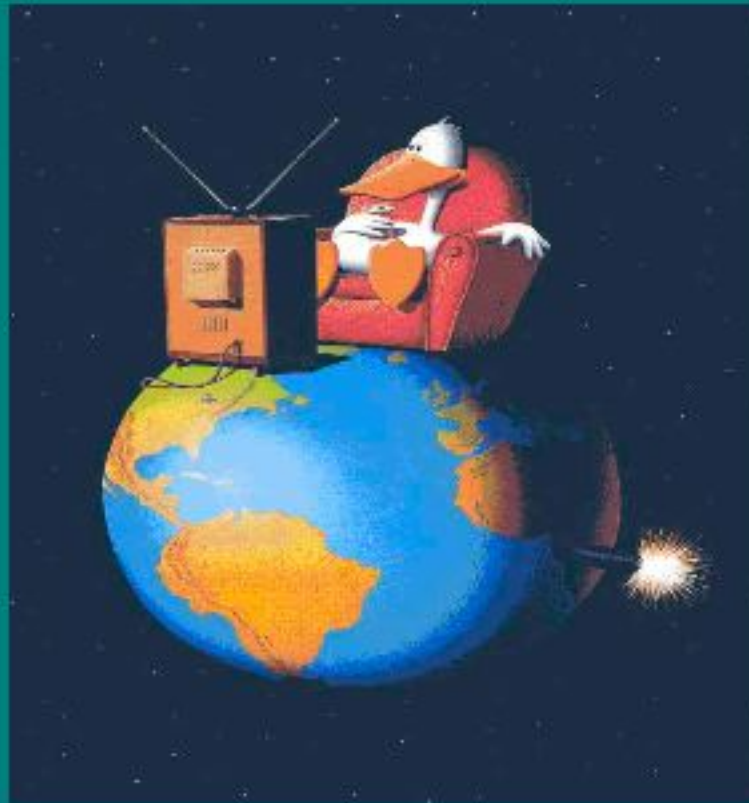
U.S. Infrastructures for Engaging  
Focus, Agility & Convergence  
in Preventing and Managing  
Large-scale Social Crises

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Global Health Initiatives, Inc.

# You in a Pandemic?



**How will the U.S. Government & U.S. Society  
Enable Americans to Become Resilient  
in High Risk, Low Trust Circumstances?**

Dr. Michael D. McDonald, Global Health Initiatives, Inc.

ATTENTION.. WE INTERRUPT  
THIS EMERGENCY BREAKING  
NEWS BULLETIN WITH AN  
EVEN SCARIER EMERGENCY  
BREAKING NEWS BULLETIN..

MOE  
FEDERS



# WHO Announced a Phase VI Pandemic Alert



The screenshot shows the WHO website interface. At the top, there is a navigation bar with the WHO logo and the text "World Health Organization". To the right of the logo, there are language options: "عربي", "中文", "English", and "Français". Below the logo, there is a vertical menu with links: "Home", "About WHO", "Countries", "Health topics", "Publications", "Data and statistics", and "Programmes and projects". The main content area is titled "HIGHLIGHTS" and features a photograph of Dr. Margaret Chan, the WHO Director-General, speaking at a podium. Below the photo, the text reads "WHO Director-General Dr Margaret Chan." and "Influenza pandemic alert raised to phase 6". To the right of the photo, there is a box containing links: "Influenza A(H1N1)", "What is phase 6?", "What about severity?", "Latest update: no. 48", "Timeline of all cases (Requires Flash player)", and "Full coverage".

- We are now in the first pandemic in 41 years
- As of June 11, 2009
  - 29,000 Confirmed Cases of H1N1 "Swine Flu"
  - Confirmed Cases in 74 Countries
  - All 50 States within the U.S. have Cases, 13,000 Confirmed Cases
  - 144 deaths: so far the SO-H1N1 Virus is Mild
  - H1N1/2009 Spring Outbreak Currently Mirroring 1918 Pandemic

# Questions Regarding Pandemic Preparedness in the U.S.



- Is it time for NCR to prepare for pandemic flu?
- Is NCR at less risk of pandemic flu than in 1918 and 1919? Why or why not?
- What is NCR actually preparing to do during Q3 2009
  - to address a severe H1N1 pandemic?
  - to maintain business as usual in light of a rapidly escalating perception of risk from H1N1 "Swine Flu?"
- In what ways are we more at risk than in 1918?
- Should we quietly help those institutions whose personnel are more at risk of being vectors of H1N1?
- What can we do to assist the most at risk neighborhoods and special populations?
- Can intelligent social networks be developed to reduce the risk of infectious disease transmission and economic damage?
  - Under pandemic conditions

# Is the U.S. Doing What is Necessary to Prepare for and Manage the 2009/2010 Pandemic?



# Given a 120 Day Window to Prepare for a Pandemic,

## Prepare for a Pandemic,

### What Will this Community Do?

- Force Protection
- Force Readiness
- Defense Support of Civilian Authorities
  
- Engage FAC principles, tools and methodologies to protect the health and human security of all Americans

# Core NSSI Premise: The U.S. Needs a Resilience System founded on Fifth Generation C2 Systems



- What could be stood up in 90 to 120 days?
- How can FAC Teams and Resilience Networks be engaged and scaled to face the pandemic challenges of the days and months ahead?



**DKMS**

Anticipatory Science

Evidence  
Surveillance  
Indications and Warnings  
Templates/Message Maps  
Decision Tools

Intelligent  
Agents

Smart  
Swarms

S.F./Silicon Valley  
Info Infrastructure

Chicago

Boston

SW Penn  
Risk  
messaging

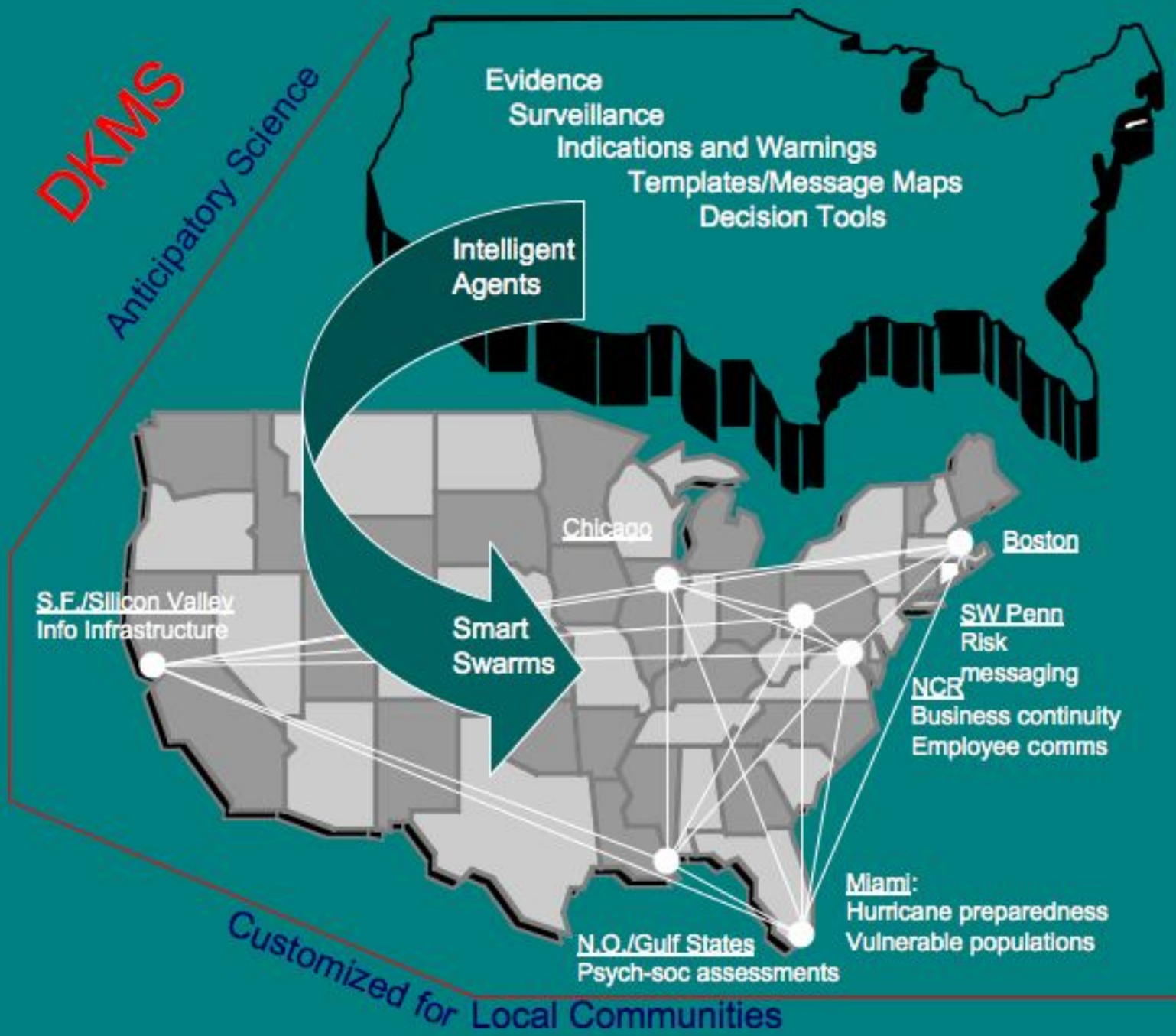
NCR  
Business continuity  
Employee comms

Miami:  
Hurricane preparedness  
Vulnerable populations

N.O./Gulf States  
Psych-soc assessments

Customized for Local Communities

**Resilience Network**



# 1918 Flu: The Tale of Two Cities

50 million to 200 million deaths worldwide

- **Los Angeles**
  - Took early action on quarantines and isolation
  - Banned public meetings
  - Pasadena required use of masks in public
- **San Francisco**
  - Took action on quarantines and isolation weeks later than Los Angeles
  - Decided to go forward with a War Bonds Parade after severe cases and deaths were emerging
  - No use of masks

San Francisco developed twice as many cases of the 1918 Flu compared to Los Angeles.

# Sri Lanka Tsunami 2005:

What have we learned from the use of Knowledge Management and Smart Swarms Used to Address the Tsunami Disaster?



# Aceh Indonesia Earthquake/Tsunami 2005:

What can we learn from the use of Knowledge Management and Smart Swarms to Address Catastrophic Disaster?



# Indian Ocean Basin Tsunami Response

Phase I Disaster Knowledge Management Pilot  
Strong Angel SmartSwarms Engaged



# Hurricane Katrina 2005:

What has the U.S. learned from our lack of Knowledge Management and Smart Swarms in New Orleans and the Mississippi Gulf Coast?



# Hurricane Katrina

## Disaster Knowledge Management System Resilience Network Pilot Engaged

### Resilience Network Town Meeting

- About
- Objectives
- How it Works
- Technology Applications
- Facilitator Information
- Sharing What We Learn
- Mission Statement
- News and Events
- Overview and History
- Real Life Town Meetings
- Web Based Town Meetings
- Coordination
- Media
- Training
- Prototypes
- FAQs
- Contact

### DKMS Podcasts

- Senate Approves Funds for Pandemic Flu
- Mike McDonald Audio Welcome

more

### MDMcDonald's bookmarks

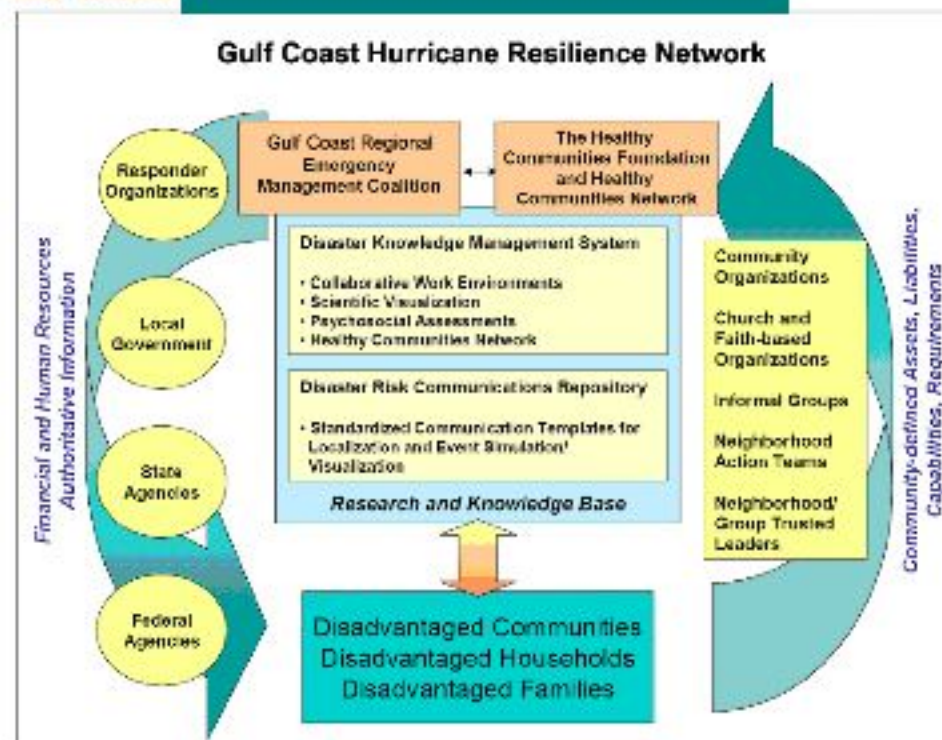
- Image galleries

powered by

### Resilience Network

### Helping Communities Envision and Plan a More Optimal New Normal

Submitted by MDMcDonald's on 11/20/05 10:28:13 AM. Announcement | Architecture | DHS-PEMA | Gulf Coast | Resilience



- San Francisco Bay Area Resilience Network
- Chicago Metropolitan Resilience Network
- National Capital Region Resilience Network
- Southwestern Pennsylvania Resilience Network
- Boston Metropolitan Resilience Network
- Risk Management and Insurance
- New Orleans Resilience Network
- DKMS Phase II, Stage II Discussion
- Simulation Validation
- Pacific Disaster Center

more

### Events

November 2005						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

### External News Items

State Pandemic Flu Plans posted by HHS

Disaster response worldwide is stunted by something

# Mobility Workstations & Hastily Formed Networks



e.g., PanFlu Surveillance Data Collection Kits



# Will the U.S. Duck & Cover for H1N1 Pandemic?



In 2006, one percent of the President's Pandemic Flu Plan was allocated to communications



# What if Community Resilience Networks were Enabled Throughout the U.S. Now?



Trigger Point-based Prospective Best Practices  
Situational Awareness with Common Operating Picture  
Strategic Action in Mission Critical Gaps  
Engaging FAC-enabled Intelligent Social Networks

# National Sustainable Security Infrastructure Mission



The NSSI prepares our nation  
and lays a foundation  
for protecting the health and human security of Americans  
in the face of rapid global change and uncertainty

# NSSI Goal and Activities

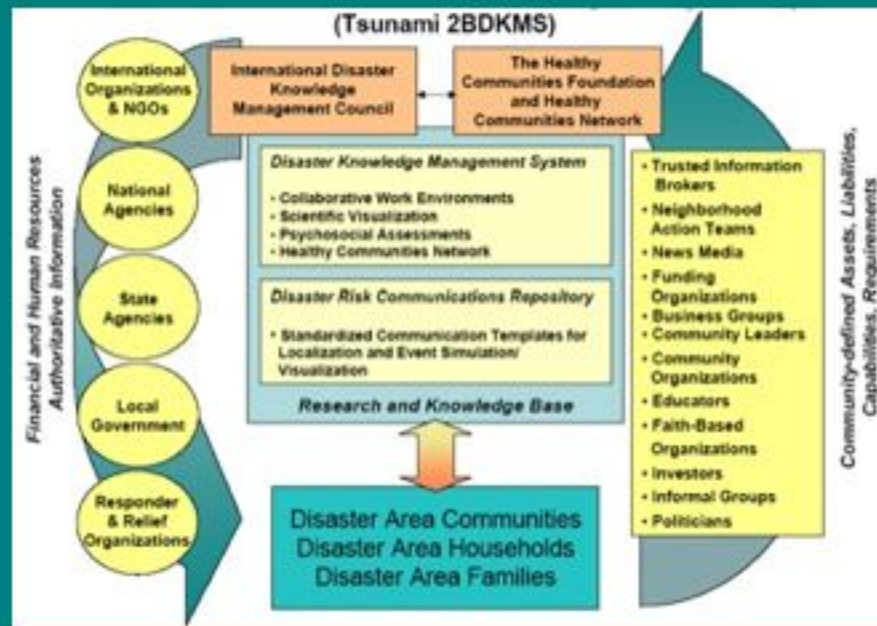
Provide a Society-wide Overarching Interoperable Umbrella for All Human & Machine Infrastructures Focused on Sustainable Security

- Within Government Interoperability
- Government to Civil Sector Interoperability
- Civilian Sector Interoperability
- U.S. Resilience System

# U.S. Resilience System Components

- Resilience Networks
- FAC Teams
- ALADIN (Adaptive Logistics & Distribution Intelligent Network)
- Trust Networks

# DKMS Resilience Networks Core Functions



- **Anticipatory Science Base** - Prospective Best Practices
- **Situational Awareness** - Common Operating Picture
- **Strategic Action in Mission Critical Gaps**
- **Intelligent Social Networks** - Smart Swarms

# Free Open Source WIKI Platform

- Low Barrier to Entry for Community Information Reception and Knowledge Production
- Standard Open Source Architecture: Inexpensive, Engages Local Talent in Reuse: Interoperable, Scaleable, and Extensible
- Rapidly Pushed to Nations, Regions, and Cities
- Rapidly Pulled by Communities, Neighborhoods, Institutions, and Other Organic Social Networks as (HOLON) Nested Subsystems

# Catalyzing a Massively Parallel Knowledge Production System



Each Resilience Network is a  
Producer of Knowledge  
as well as a Receiver of Information

Empowering Local Trusted Communicators & Thought Leaders  
with Situational Awareness & Best Evidence



# Resilience Network Structure

- Non-hierarchical non-controlled systems
- Create an exponential increase in the knowledge base and its adoption at the community level
- In contrast to the linear growth of knowledge assets in solely traditional fee-for-service markets
  - which tend to skip over, if not actively avoid vulnerable communities
  - that have little or no commercial demand for services outside of their economic reach

# Resilience Networks are a Nervous System for Vulnerable Communities

- Improving and maintaining social connectedness
- Catalyzing the growth of local knowledge assets
- Rapidly customizable and localizable
  - to the community and neighborhood level
- Improving conditions for those at high risk and with a high burden of illness
  - where there is a low socio-economic demand for commercial services

# Resilience Networks



A Rapidly Growing U.S. Testbed For Social Determinants Mapping, Health Equity, Community Preparedness, And Resilience

Online Multi-user Environment for Exercises and Serious Games

(e.g. National Capital Region PanFlu Exercise)

**Hypothetical Case:  
WHO Phase 4/Phase  
5? Outbreak**





WHO Pandemic Flu Alert  
Phase Three

### MySite

Create your own MySite  
page.

### MDMcDonald

- Content ▶
- Forums ▶
- My account
- My inbox
- Administer ▶
- Log out
- My unread

### Month

Jul 2007						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

### Resilience Networks



## DISASTER KNOWLEDGE MANAGEMENT SYSTEM

(Click on any of the text within the above graphic to find information on that topic)

### An Innovative, High-Impact Communication and Collaboration Toolset

Designed to prepare communities for disasters and mitigate their effects within a Global, All-Hazards, Knowledge Management System

The Disaster Knowledge Management System (DKMS) provides situational awareness enabling strategic interventions from the global level down to the impacted neighborhood and individual in emerging crises and in disaster areas during and after

### Community Emergency Alert System

911.Gov  
Community Response Grid

Report emergencies & add information

Major Accidents:  
Vehicle, Equipment,  
Building collapse

Weather:  
Tornado, Flood,  
Extreme heat/cold

Medical:  
Influenza, Air quality,  
Food poisoning

Threats:  
Biological, Chemical,  
Nuclear, Radiation

Other

### Global Incidents



### Tracking Birdflu





Search

### Tracking Birdflu



### DKMS Blog

- CDC's Blog: "This Blog Can Save Your Life" 1
- Two Suspected H5N1 Cases in Afghanistan 1
- Use of Libraries in Disaster Assistance 1

more

### Hypothetical: WHO Phase 4 (Phase 5?) Pandemic



### What are Local Resilience Networks?

How can they help your community prepare for and recover from disasters?

Resilience Networks are coalitions that emerge from formal and informal processes to enable communities to better prepare for, respond to, and recovery from crisis and change. They are often catalyzed by a rapid economic or environmental change, impending transformation, or a catastrophic event.

Federal agencies, such as NOAA and FEMA, are beginning to recognize resilience networks as essential social networking tools, risk communication channels, and smartswarm action organizations. Resilience networks have unique characteristics enabling them to address the needs of vulnerable populations and assist recovery efforts in moving toward sustainable, more optimal new normal conditions following catastrophic events. Resilience Network Town Meetings are a natural social process that:

### WHO Pandemic Flu Alert Phase Three

### Global Incidents



### DKMS News

- US mulls backing 'medicine rice' 1
- Killer Earthquake Hits Western Sumatra 1
- Indonesia, WHO Fail to Resolve Flap Over Bird Flu Vaccine 1

more

### Resilience Networks



# DC Maritime Emergency Management System

Preparedness    Disaster Response    Readiness Assessment    Boat Preparedness    Dock Emergency Management Manual    Best Practices

## National Threat Advisory:

**ELEVATED**



Significant Risk Of Terrorist Attacks

## MDMcDonald

- Log out
- Create content
- Groups
- Collaboratories
- Blogs
- Most Viewed
- My account
- My inbox
- Top Content
- Contact Us
- News aggregator
- Administer
- My unread

## Month

Jun 2008						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

## MySite

Create your own MySite page.

## Search

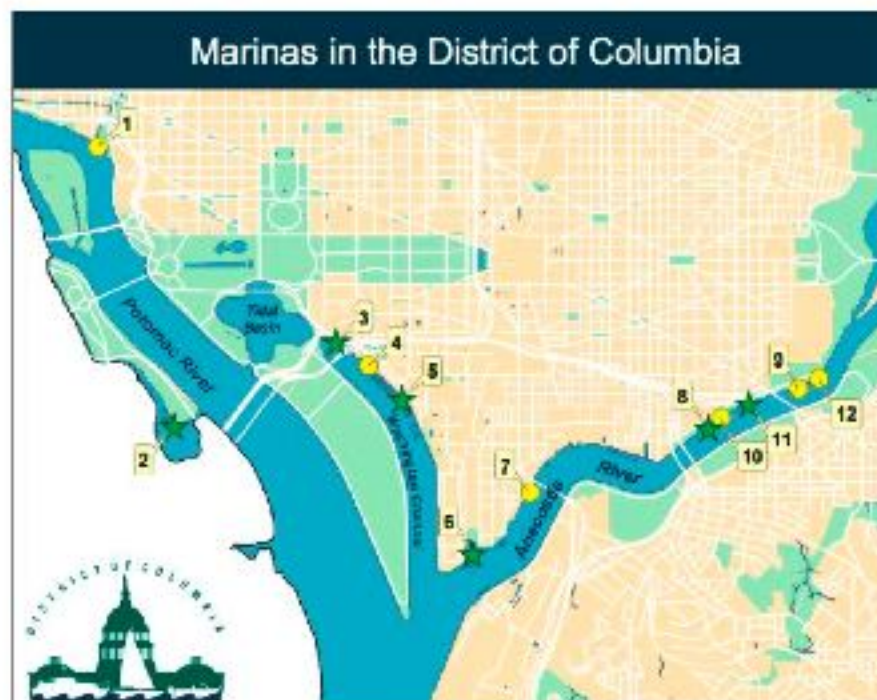
 

## Alerts



WHO Pandemic Flu Alert Phase Three

## Weather Advisories



## Hoping for the Best, Planning for the Worst...

Individuals, families, and their communities tend to prepare and respond well to regular activities under known circumstances in their everyday life. Disasters in the United States and the National Capital Region, fortunately, have tended to be infrequent in the past. Unfortunately, the 21st Century is already delivering new challenges such as terrorism and increased storm activity, along with the traditional challenges for maritime communities. The DC Waterfront, and its marinas, being at the heart of the National Capital Region, is committed to building an emergency management system and culture of resilience and self-reliance, addresses the traditional and emerging challenges by soliciting its leadership, members, and





# Capital Yacht Club



1000 Water Street, SW Washington, DC 20024 202-488-8110

38.52° N, 77.01° W [office@capitalyachtclub.com](mailto:office@capitalyachtclub.com)

## All Hazards Emergency Management System

[CYC Preparedness](#) | [Disaster Response](#) | [Readiness Assessment](#) | [Boat Preparedness](#) | [Dock Emergency Management Manual](#) | [Best Practices](#)

### Coast Guard



United States Coast Guard  
U.S. Department of Homeland Security



National Threat Advisory:  
**ELEVATED**



Significant Risk Of Terrorist Attacks

### MySite

Create your own MySite page.

### Poll

What are the "must have" sections of the Emergency

### Home

### Best Practices

- [Post new forum topic.](#)

### Forum

#### Man Overboard

CYC Standard of Practice for Retrieving People from the Water and Reporting Drownings.

Topics

Posts

Last post

2

2

2 weeks 6 days ago  
by [MDMcDonald](#)

#### Fire Management

This is the CYC Best Practice for Fire Management.

2

2

3 weeks 1 day ago  
by [MDMcDonald](#)

#### Storm Preparation

This is a CYC Standard of Practice for Storm Preparation.

2

2

2 weeks 6 days ago  
by [MDMcDonald](#)

#### Serious Acute Illness or Injury

This a CYC Standard of Practice to Address Serious Acute Illness or Injury

0

0

n/a

#### Winterization

This is a CYC Standard of Practice for Winterizing Boats.

0

0

n/a

### Search

### Alerts



WHO Pandemic Flu Alert  
Phase Three

### Weather Advisories





[BBC Updates](#)

[IMC Updates](#)

[USAID Updates](#)

## RED ALERT

**Yangon, Burma**  
  
**77°F**  
 Mostly Cloudy  
[Hourly Forecast: 12:00hr](#)

### Latest Weather Updates

- [Yangon, Myanmar Current Conditions - 5:30 PM MMT Jul. 11](#)
- [Forecast for Friday as of Jul. 11 6:30 AM MMT](#)

[more](#)

### MDMcDonald

- [Log out](#)
- [Create content](#)
- [Groups](#)
- [Collaboratories](#)
- [Blogs](#)
- [Most Viewed](#)
- [My account](#)

June 19, 2008

In country Myanmar Resilience Network (MRN) staff is reporting that travel and access to vulnerable populations in the Delta region is difficult for most of the reasons. Local NGOs already planned to be in this area have a great set of plans for



Bringing Help and Hope to Where it is Needed Most

### Relief Web Updates

- [Myanmar: Japan donates US\\$3 million for post-cyclone roofing](#)
- [World Vision calls on donors to 'step up' as appeal for Myanmar Cyclone funding reopens](#)
- [Humanitarian agencies seek \\$303.6 million for Myanmar cyclone survivors](#)

[\(1\) more](#)

### Alerts



### ReliefWeb Maps

- [Timor-Leste: Existing IDP Camps and Transitional Shelter Sites in Dili as at 6 July 2008](#)
- [Timor-Leste: IDPs Areas of Origin as Registered under the Government's HMF Program \(DILI District\)](#)



# U.S. Resilience System

- Assessing disparities, vulnerability, security, and resilience
- Providing situational awareness
- Improving prevention and preparedness
- Engaging intelligent social networks
- Contributing to a breakthrough in public health and community resilience
  - By forming a Public Health 3.0 infrastructure
- Building connectedness and scale to empower socio-ecological integrity and governance at the local level

## Contact

**Michael D. McDonald, Dr.P.H.**  
**Michael.D.McDonald@Mac.Com**

# Assessing Mission Critical Gaps

## Community Capacity Building & Resilience

 **Avian Flu Environmental Scan**

Please take NDRCI Avian Flu Environmental Scan Survey which can be filled out online.

 **Global Outbreaks Map**



 **WHO Outbreak News**

- Avian influenza – situation in Thailand, Indonesia – update 36
- Avian influenza – situation in Thailand – update 35
- Yellow fever in Senegal
- Avian influenza – new areas with infection in birds – update 34
- Avian influenza – situation in Indonesia – update 33

[more](#)

 **Flu Wiki**

- Geographic / New Jersey
- Geographic / Service New Zealand

- Environmental Scan
- Community Knowledge Management Systems
- Community Resilience Networks
- Multi-level Triage Systems
- Risk Communication and SOP Repository
- Social Distance & Bridge Network Management
- Models of Psychosocial Dimensions
- Social Network Models
- Community Assessments
- Standard Community Capacity Building Plans
- Training Modules for Capacity Builders
- Resilience Games to Educate the Public
- Exercises for Developing Resilience

# Core Public Health 3.0

## Modules and Applications

- Community Capacity Building (Alameda County)
- Health Equity Assessment (King County, Seattle)
- Healthy Communities Assessment (State of California)
- Healthy Communities Indicator Dashboards (SF Bay Area, CA)
- Resilient Communities Preparedness Assessment (Prince Georges County, MD)
- Asset Mapping (Bernilillo County, NM)
- Threats and Vulnerability Trigger Points and Maps (Mid Delta Group, MS)
- Food Gap Assessment and Management (Washington D.C.)
- Overdose Outbreak Simulation and Planning Process (Wayne County, MI)
- Cross-sector Collaboration (Marlborough County, South Carolina)
- Rural Medical Network (Marlborough County, South Carolina)
- Thrive (Prevention Institute)