



# Capstone Exercise June 15, 2014

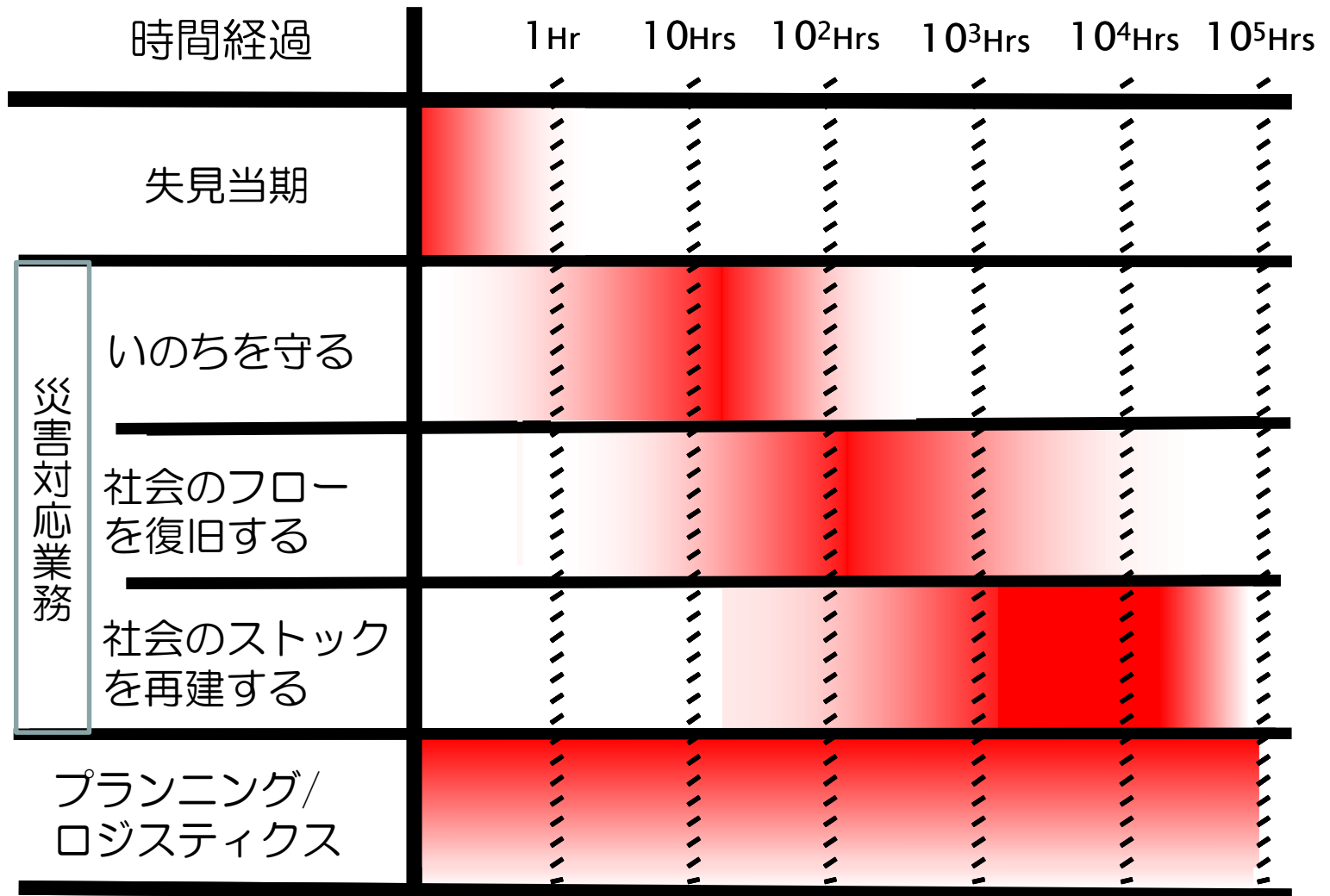
## New Madrid Seismic Zone 地震シナリオを用いた 8州の合同訓練



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# 災害対応過程のモデル化(何を・いつ)





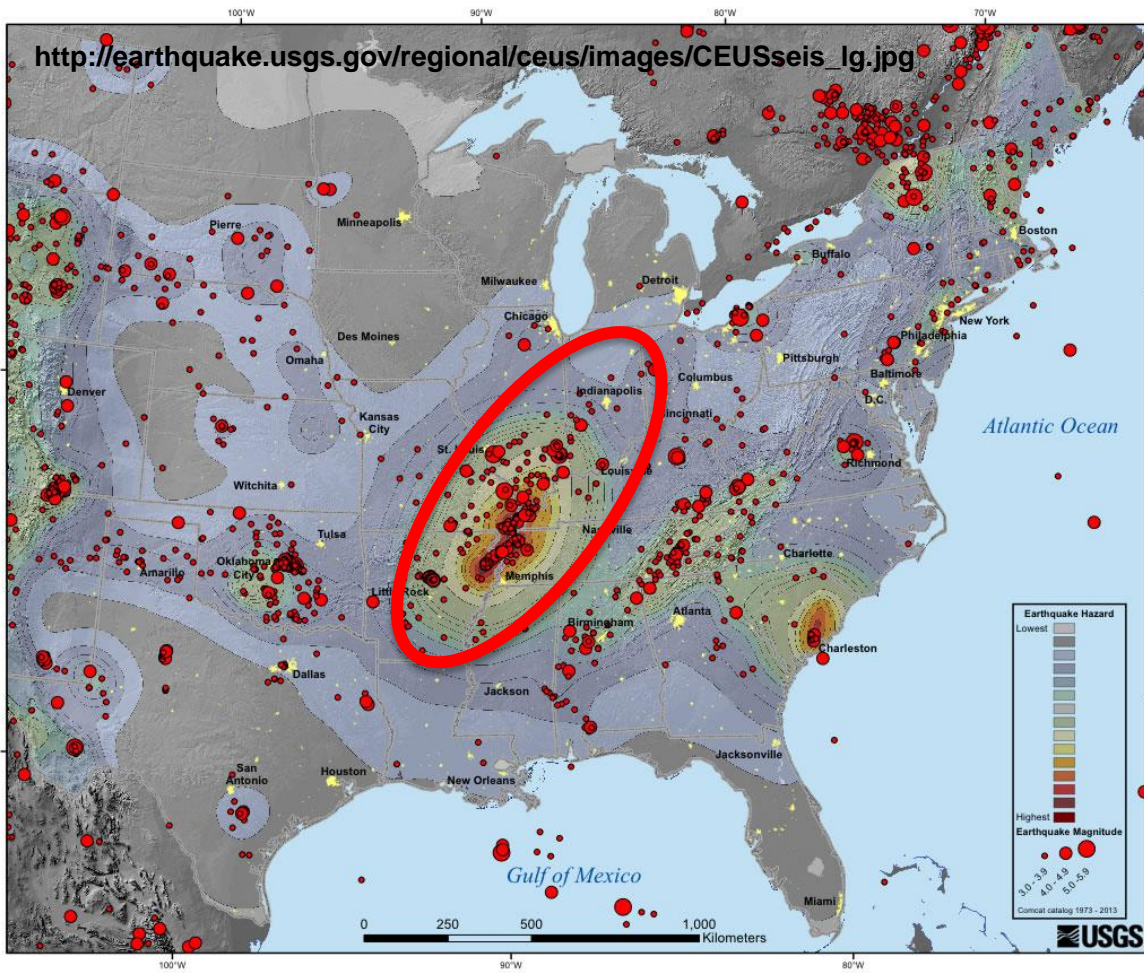
## 3つの研究課題

- **失見当期をできるだけ短くする**
  - 情報処理・情報共有のあり方：状況認識の統一
- **災害対応オペレーションを効果的に実施できる**
  - 防災基本計画に基づく応急対策の質の向上
  - 復興過程の理論化
- **災害対応マネジメントを効果的に実施できる**
  - 災害対応の標準化
  - 研修・訓練プログラムの充実



# New Madrid Seismic Zone

## CAPSTONE-14 参加8州



- イリノイ州 : Illinois
  - ミズーリ州 : Missouri
  - アーカンサス州 : Arkansas
  - ミシシッピ州 : Mississippi
  - アラバマ州 : Alabama
  - テネシー州 : Tennessee
  - ケンタッキー州 : Kentucky
  - インディアナ州 : Indiana
- (450カウンティ参加)



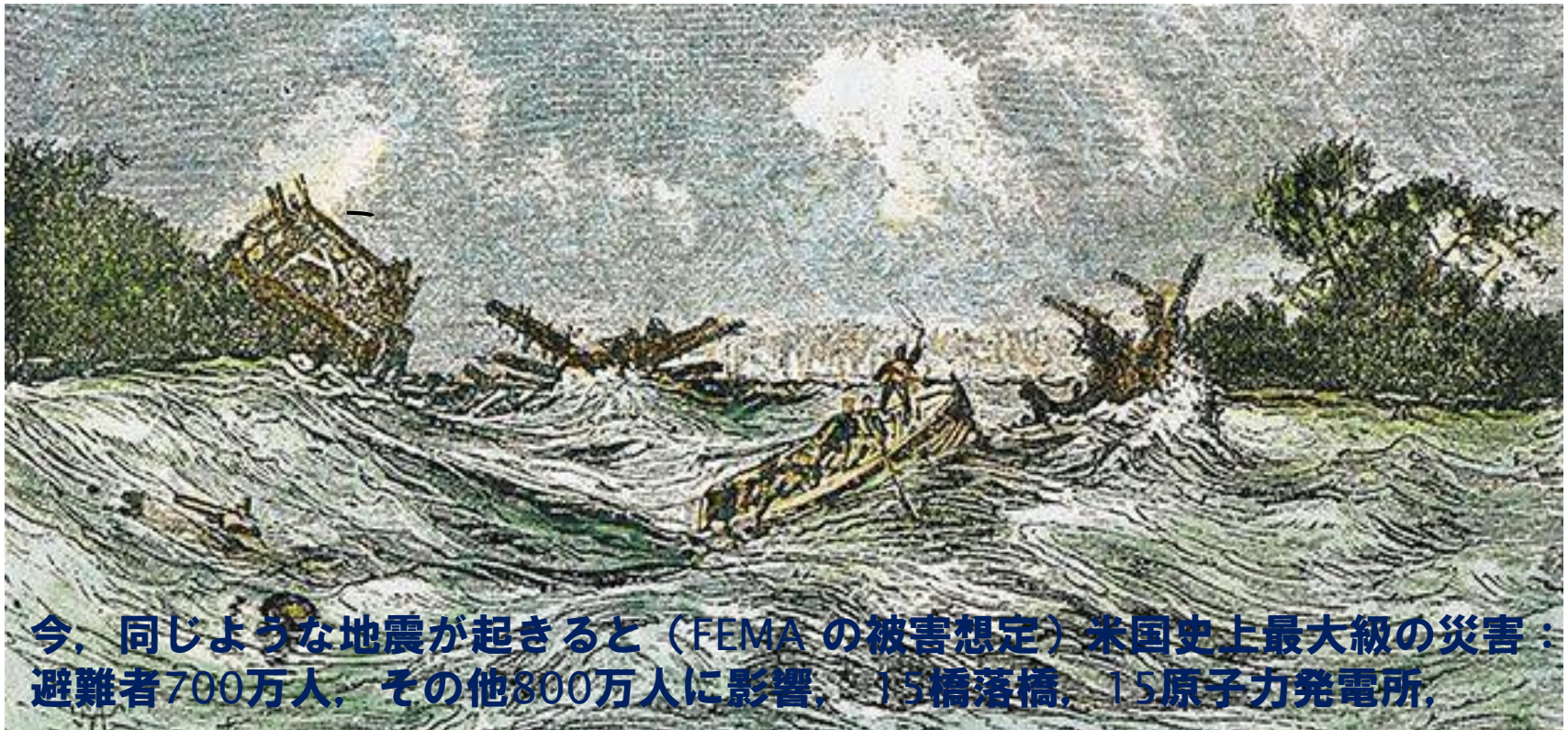
# New Madrid Earthquakes 1811-1812

1811年12月16日 午前2時15分、アーカンソー州北東部

1811年12月16日 午前8時15分、アーカンソー州北東部

1812年1月23日 午前9時、ミズーリ州ブートヒール地域

1812年2月7日午前4時45分、ミズーリ州ニューマドリッド



今、同じような地震が起きると（FEMAの被害想定）米国史上最大級の災害：  
避難者700万人、その他800万人に影響、15橋落橋、15原子力発電所、

A 19th-century print of New Madrid earthquake chaos. (Granger Collection, NYC)



# Illinois 州災害対策本部(EOC)





# Kentucky州災害対策本部(EOC)





# 被害推定

## 人的被害:

- 死者 3,500
- 負傷者 85,000

## 物的被害:

- 建物被害 715,000
- 建物倒壊 32,000
- 橋梁 3,500
- 空港 140
- 港湾 230
- 鉄道 30
- ダム 325
- 堤防 100
- 消防署 725
- 警察署 375
- 有害物質施設 253
- 災害廃棄物(t) 50M

## 重要施設被害:

- 病院 130
- 学校 1,300

## 機能被害 (Day 1):

- 停電 (世帯) 2.4M
- 断水 (世帯) 1.0M

## 経済被害:

- 建物 \$113 B
- 交通機関 \$11 B
- ライフライン \$172 B

**総計** **\$296 B**

¥ 355,200,000,000





# 数字で捉えるCAPSTONE -14

- **準備に3年間，訓練は4日間。**
- 行政，軍，ボランティア，民間，国際機関から2,400名以上が参加・見学
- 状況付与は13,000.
- 666カウンティ/8州のうち少なくとも**450カウンティ**から報告あり
- **報告されたEEIの総数は13,104件**
- Virtual USA data sharing modelsにしたがって**2000レイヤー**のデータを利用 (e.g. WebEOC, ArcGIS Online, EMITS, et al).
- **78以上の民間企業**が参加
- ケンタッキー州では**22カウンティ**で**130件の被害調査**を実施。
- ミズリー州では，**200の現場報告**を受け付け，**14施設の被害調査**を実施
- 訓練期間は平時の**18,000倍のデータ処理**を記録。



# ブリーフィングブック (訓練趣旨説明)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

## CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing



### *An Initiative to Advance Preparedness in the Central U.S.*

In support of [Presidential Policy Directive 8 \(PPD8\)](#) the Central United States Earthquake Consortium (CUSEC) presents CAPSTONE-14. Under the direction of the [CUSEC Board of Directors](#), CAPSTONE-14 is a three-year, multi-state scope of planning and preparedness activities culminating in a major, multi-state earthquake exercise in June 2014. It is designed to strengthen partnerships between local, state, and federal governments, while engaging public and private sector entities in planning response and recovery from a catastrophic earthquake occurring within the New Madrid Seismic Zone (NMSZ). Included in the initiative are both [CUSEC Member](#), and [Associate States](#).

This effort will include mitigation, preparedness, recovery, and response planning activities that directly support legislation in the [National Earthquake Hazards Reduction Program](#). Additionally, CAPSTONE-14 will support plans to improve building inspection capabilities and promote code adoption to enhance seismic safety and community resilience.

CAPSTONE will build off of lessons learned during the [New Madrid Seismic Zone Catastrophic Planning Project and National Level Exercise 2011 \(NLE11\)](#). It will complete the full planning, training, and exercise cycle, while serving as a regional and national model to the emergency management community.

The regional exercise goals and objectives of the CAPSTONE-14 exercise will include (but are not limited to):

- Regional Communications
- Regional Shared Situational Awareness
- Regional Transportation Coordination
- Private Sector Integration
- Resource Allocation Planning
- Military Support to Civilian Authorities



# CAPATONE-14 参加8州:

## CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

### EOC Hours of Operation - CUSEC Capstone 2014 Exercise

CUSEC Exercise Overview by State



Click on above map to discover the hours of operation for State Emergency Operation Center, State SimCell, and Business Emergency Operation Center.



# 地震シナリオ

## (New Madrid Seismic Zoneで2つの地震が連続発生)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Day 1 Framing Inject: NMSZ Alert, Warning and Notification

### Impact Summary:

The morning of 16 June 2014, the southwestern segment of the New Madrid Seismic Zone (NMSZ) ruptures near Marked Tree, Arkansas. The rupture of the segment continues approximately 90 miles in a northeast direction to near Ridgley, Tennessee. This is depicted on the map on the top left. Click on the map to interact with the USGS data.

A second earthquake event takes place in the Wabash Valley Fault impacting Illinois and Indiana. Major news networks are reporting that the earthquake was felt in from Chicago to Washington D.C. and as far south as Georgia.

There are reports of widespread damage for hundreds of miles, including collapse of large-scale buildings, power and communication failures, gas leaks, and other damages associated with liquefaction. There are numerous cascading effects that will continue to transpire.

An alert, warning and notification has been generated by Arkansas Department of Emergency Management to officials and the public in every county in the NMSZ using the Integrated Public Alert and Warning System (IPAWS). This is geographically depicted in the webmap on the bottom left.

The next pages will illustrate the initial extent of impact and the status of operations related to each of the 6 regional objectives.

### USGS PAGER Alert for:

New Madrid Seismic Zone ([link](#))

Wabash Fault ([link](#))

CUSEC Capstone 2014 Exercise HAZUS WebMap Provided by USGS



EXERCISE DATA

Capstone 2014 IPAWS Test Field



Integrated Public Alert & Warning System (IPAWS) Field for the CUSEC Capstone 2014 Exercise



# 想定される建物被害 (被害程度・被害調査に必要となる人員推定)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

## Day 1 Initial Impact Summary

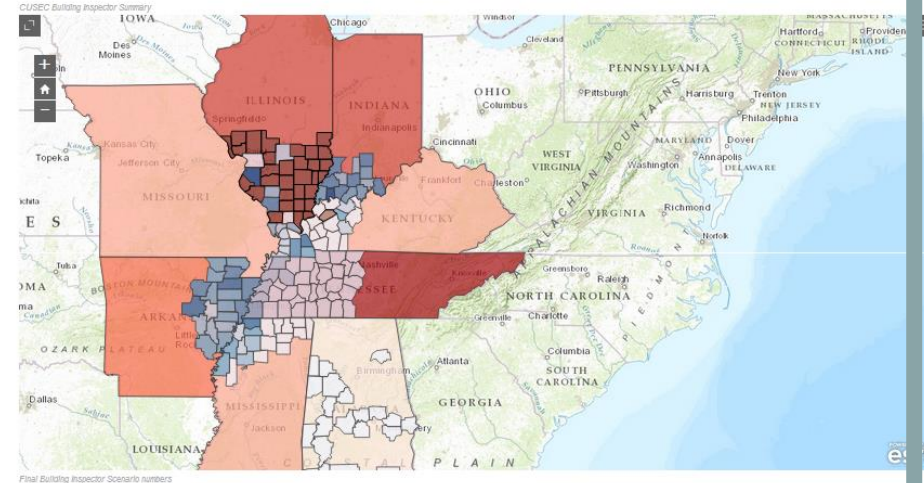
### Damage Assessment Summary:

Soon after the USGS PAGER notification, and subsequent IPAWS alerts, State EOCs began to collect data to understand the initial impact of the earthquake events. Due to limited communications capabilities, operations and planning staff in each state leveraged impact models developed based on a likely NMSZ 7.7 Earthquake Scenario throughout the course of the Capstone 2014 Exercise regional planning meetings.

The impact summary estimates may serve as the best guide for emergency managers to begin to plan and posture for response and recovery missions. The model impact summaries include the following elements:

1. # Damaged Buildings
2. % of Damaged Buildings to Inspect
3. # of Days to Complete Inspections
4. Total Inspections Needed
5. Estimated Inspections Per Team
6. Inspectors Required
7. Red/Yellow/Green Status Estimates

This information will help states, in the absence of full knowledge of the actual impact, begin to initiate pre-scripted missions and coordination with government agencies, private sector and the public. The webmap is interactive and will allow users to check on projected impacts for each county.





# 共有すべき18種類の情報 (Essential Elements of Information)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

## Day 1 EEI Status Overview

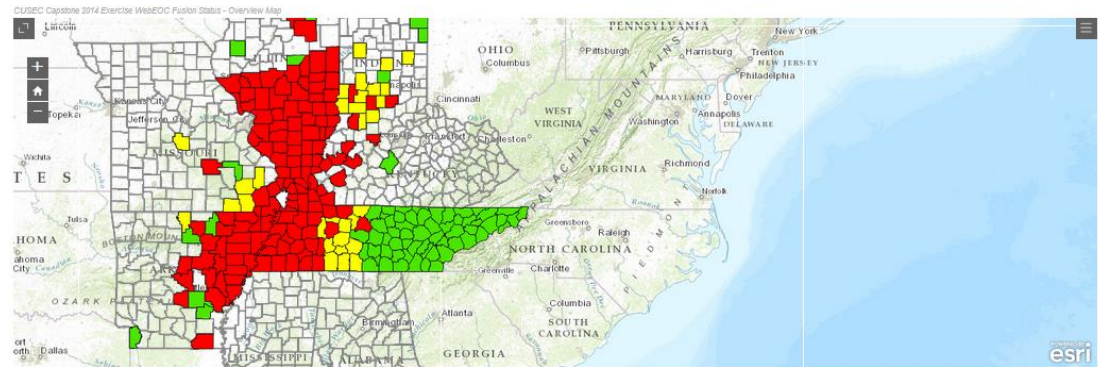
### Essential Elements of Information: A Regional Snapshot

Following the event notification and initial damage assessments, the CUSEC State Emergency Operations Centers begin to report, track and share the county-level status of 18 EEIs throughout the exercise. An EEI status summary is accessible in the webmap located in the top right corner of this page. The EEIs reported by each state include:

1. Electricity Grid
2. Natural Gas Grid
3. Public Water Grid
4. Road Status (including bridges)
5. Rail Network (including bridges)
6. Navigable Waterways
7. Air Transportation Infrastructure
8. Area Command Locations
9. Staging Areas
10. Points of Distribution (PODs)
11. Joint Reception, Staging, Onward Movement and Integration (JRSOI) Sites
12. Evacuation Orders
13. Injuries and Fatalities
14. Shelters
15. Private Sector Infrastructure
16. U.S. Geological Survey Data (Prompt Assessment of Global Earthquakes for Response or PAGER)
17. Communications (public safety and general)
18. Hospital Status

A detailed description of the 18 EEIs, the required attributes and status variable definitions can be found in the spreadsheet located at the bottom right corner of this page.

EEIs are reported, tracked and shared leveraging existing infrastructure in each state by integrating published map services from ArcGIS Server, ArcGIS Online, Collector App, WebEOC and numerous externally provided datasets and apps. Other datasets are integrated from providers in the private sector, National Guard, FEMA, USGS and other agencies.



EXERCISE DATA - The Status of 18 EEIs

EEI	Region	Reported as Critical	Reported as Degraded	Reported as Normal
Electricity Grid	Midwest	100%	0%	0%
Natural Gas Grid	Midwest	100%	0%	0%
Public Water Grid	Midwest	100%	0%	0%
Road Status (including bridges)	Midwest	100%	0%	0%
Rail Network (including bridges)	Midwest	100%	0%	0%
Navigable Waterways	Midwest	100%	0%	0%
Air Transportation Infrastructure	Midwest	100%	0%	0%
Area Command Locations	Midwest	100%	0%	0%
Staging Areas	Midwest	100%	0%	0%
Points of Distribution (PODs)	Midwest	100%	0%	0%
Joint Reception, Staging, Onward Movement and Integration (JRSOI) Sites	Midwest	100%	0%	0%
Evacuation Orders	Midwest	100%	0%	0%
Injuries and Fatalities	Midwest	100%	0%	0%
Shelters	Midwest	100%	0%	0%
Private Sector Infrastructure	Midwest	100%	0%	0%
U.S. Geological Survey Data (Prompt Assessment of Global Earthquakes for Response or PAGER)	Midwest	100%	0%	0%
Communications (public safety and general)	Midwest	100%	0%	0%
Hospital Status	Midwest	100%	0%	0%



# 共有すべき18種類の基本情報

1. **電力** (Electricity Grid Status)
2. **都市ガス** (National Gas Grid Status)
3. **上水道** (Public Water Grid Status)
4. **道路通行可能状況** (Road Status (including Bridges))
5. **鉄道運行状況** (Rail Network Status (including Bridges))
6. **運河・航路** (Navigable Waterways Status)
7. **空港** (Air Transportation Infrastructure Status)
8. **災害対策本部** (Area Command Location Status)
9. **車両集結拠点** (Staging Area Status)
10. **物資配送拠点** (Points of Distribution Status)
11. **応援人員受付拠点** (JRSOI Sites Status) JRSOI: Joint Reception, Staging, Onward Movement and Integration
12. **避難指示発令状況** (Evacuation Orders Status)
13. **人的被害発生状況** (Injuries and Fatalities Status)
14. **避難所開設状況** (Shelters Status)
15. **ガソリンスタンド開設状況** (Private Sector Infrastructure Status)
16. **地震情報・曝露人口総数推定情報** (U.S. Geological Survey Status (e.g. PAGER))
17. **通信確保状況** (Communications Status (Public Safety and General Public))
18. **病院機能状況** (Hospital Status)



# 通信確保状況 (Communications Status)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

## Regional Objective #1: Communications Status

### CUSEC Communications Status Summary

#### Voice Communications:

In the hours after the earthquake, communications blackouts are rampant. The State EMA Directors initiate a regional Satellite Communications teleconference **MSAT CUSEC Talk Group** and states leverage amateur radio using the call sign **KE5VRO**.

#### Data Communications:

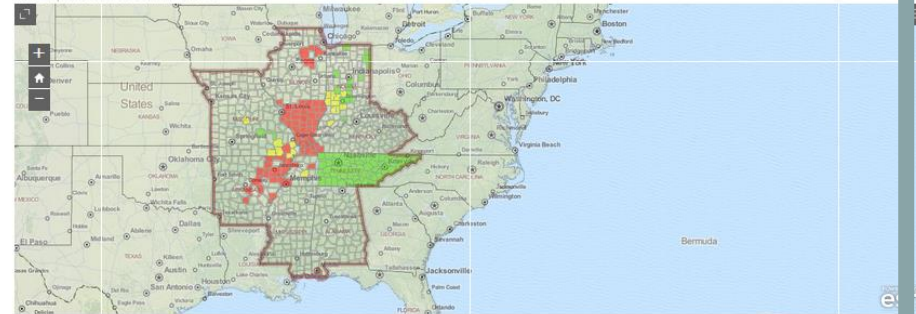
Using information reported by the states in WebEOC, captured from live sensor streams, critical infrastructure datasets, and pre-event collaboration with the private sector, a regional communications status begins to be pieced together throughout the day as states conduct internal exercise play in support of this objective.

#### The webmap includes the following datasets:

1. WebEOC Regional communications status
2. Illinois Motorola Starcom21

Other available datasets not currently displayed in this webmap but available in the CUSEC Capstone 2014 ArcGIS Online Group include: National Broadband Availability (NTIA), Telephone Exchange Boundaries, TV and Radio Stations, Cell Tower Status.

CUSEC Capstone 2014 Exercise Communication Status



EXERCISE DATA and REAL DATA

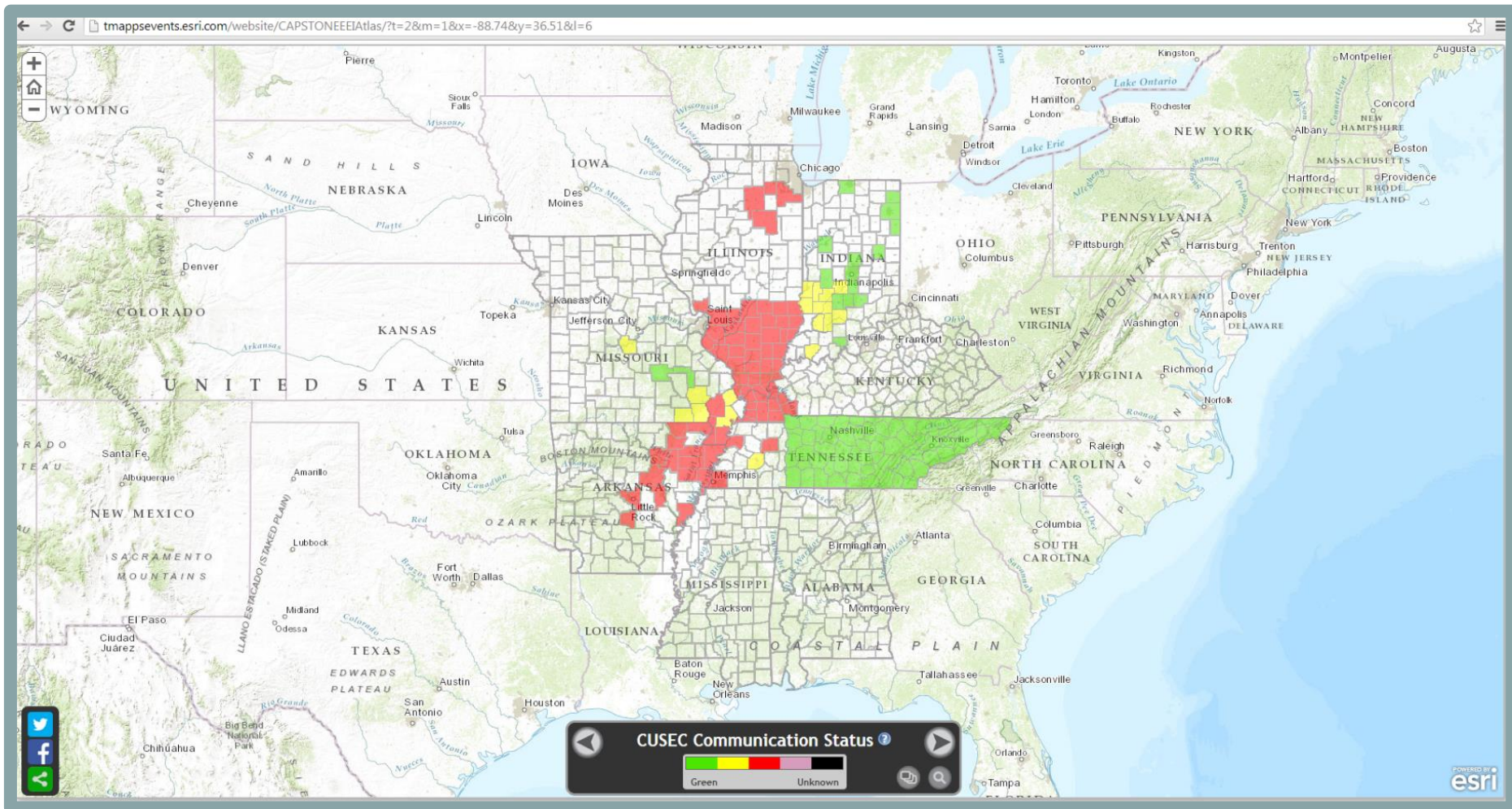
#### Decision Points/Key Actions:

1. Establish Communications to all elements
2. Establish redundant communications
3. Establish cross state boundary communications
4. Report communications outages
5. Request communications support for impacted area
6. Report communications restoration status (success)
7. Call down and notification



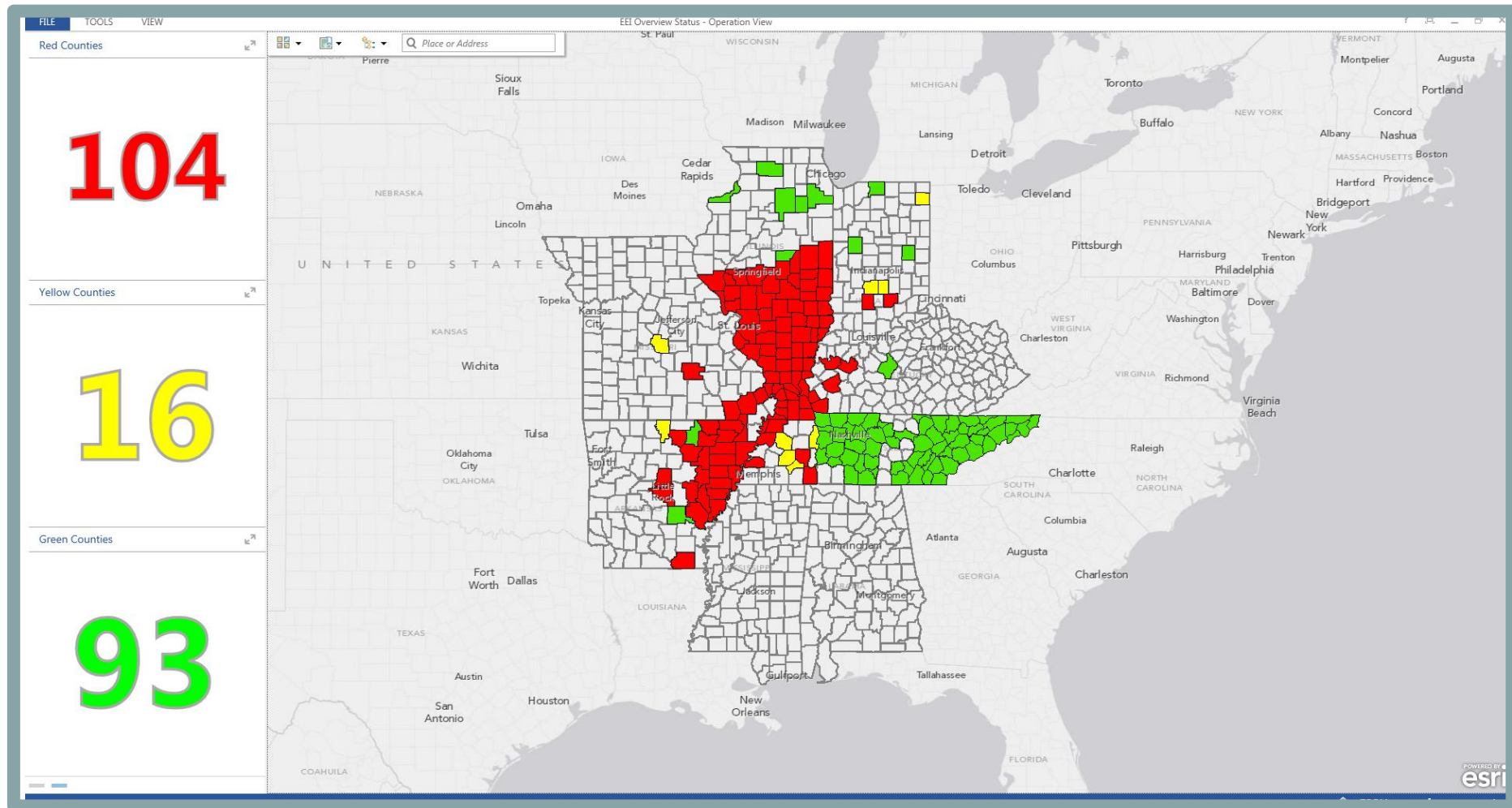


# 通信確保状況 (Communications Status)





# Operations Dashboard (集計表)





# 電力 (Electricity Grid Status)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #2: Shared Situational Awareness Status

## CUSEC Power and Utility Status Summary

### Electric Status

In the hours after the earthquake, power and utility blackouts are rampant. The state EOCs initiate coordination with infrastructure owners to begin to understand the extent of damage, access to energy, and related critical infrastructure.

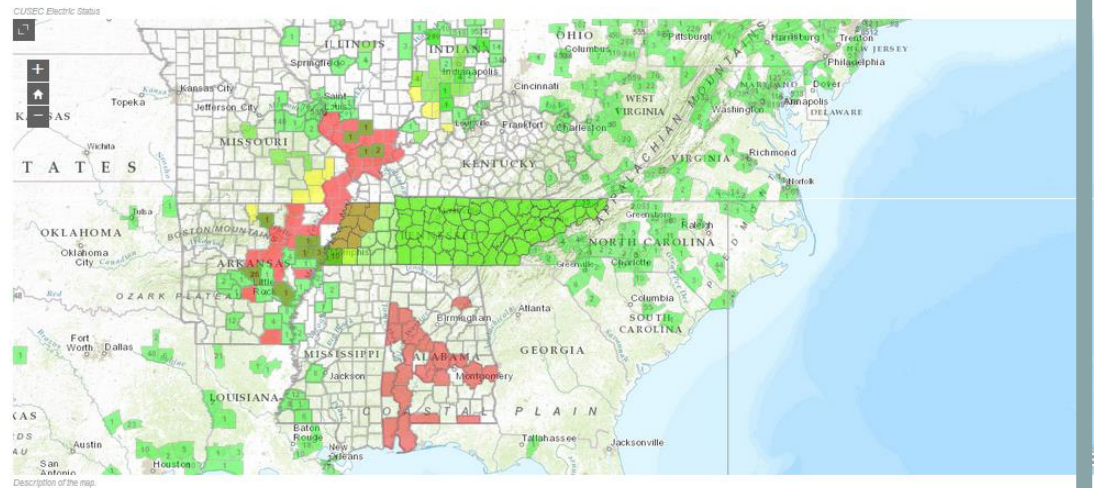
#### The webmap includes the following datasets:

1. WebEOC Fusion Electricity Grid Status
2. Private Utility Power Status (Actual)
3. Electric Transmission Lines

Other available datasets not currently displayed in this webmap but available in the CUSEC Capstone 2014 ArcGIS Online Group including the National Energy Infrastructure (U.S. Department of Energy EIA)

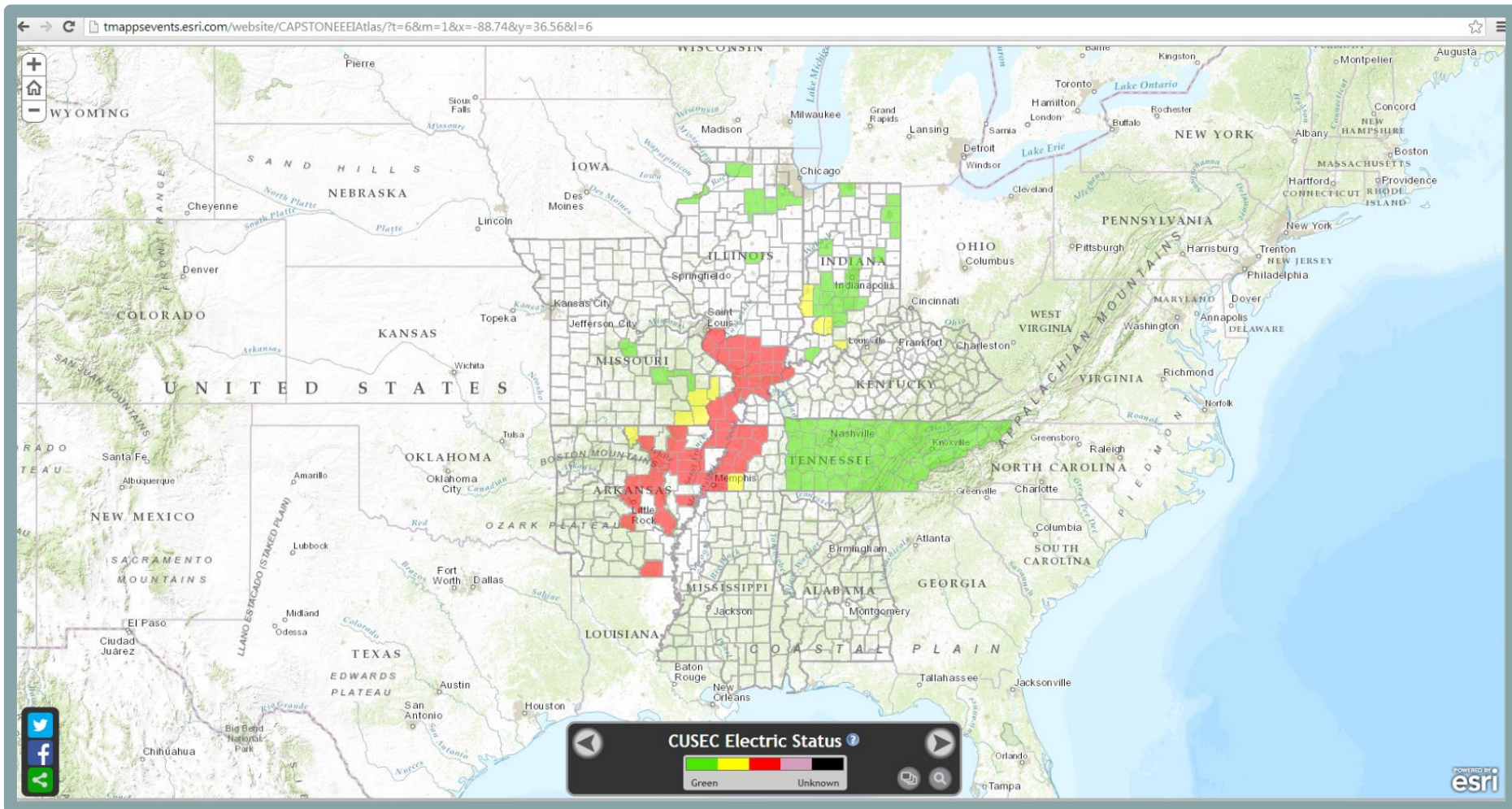
#### Decision Points/Key Actions:

1. Establish cross state boundary situational awareness
2. Report power/utility outages
3. Request and set up alternate power supply
4. Report power restoration status (success)



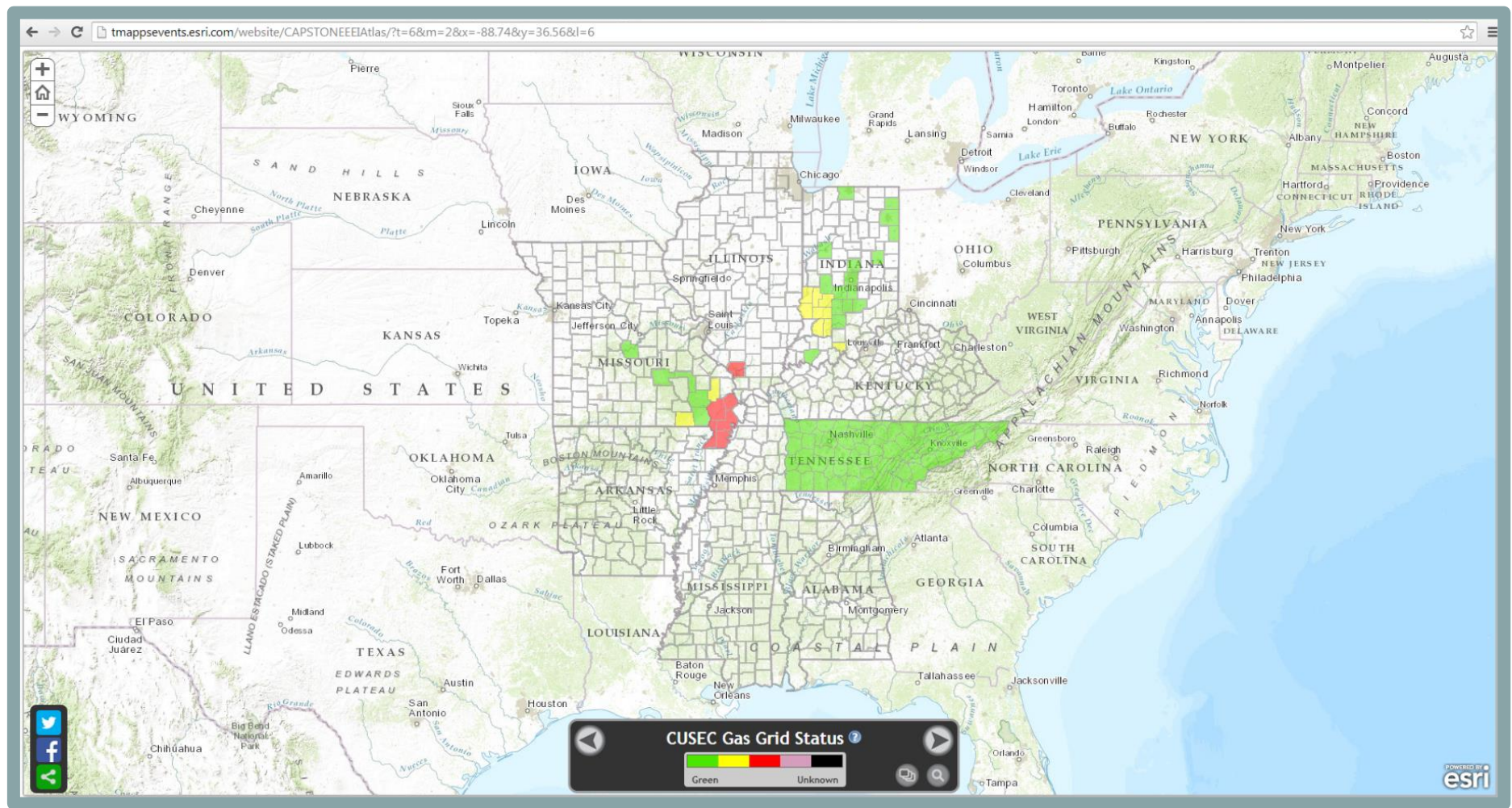


# 電力 (Electricity Grid Status)



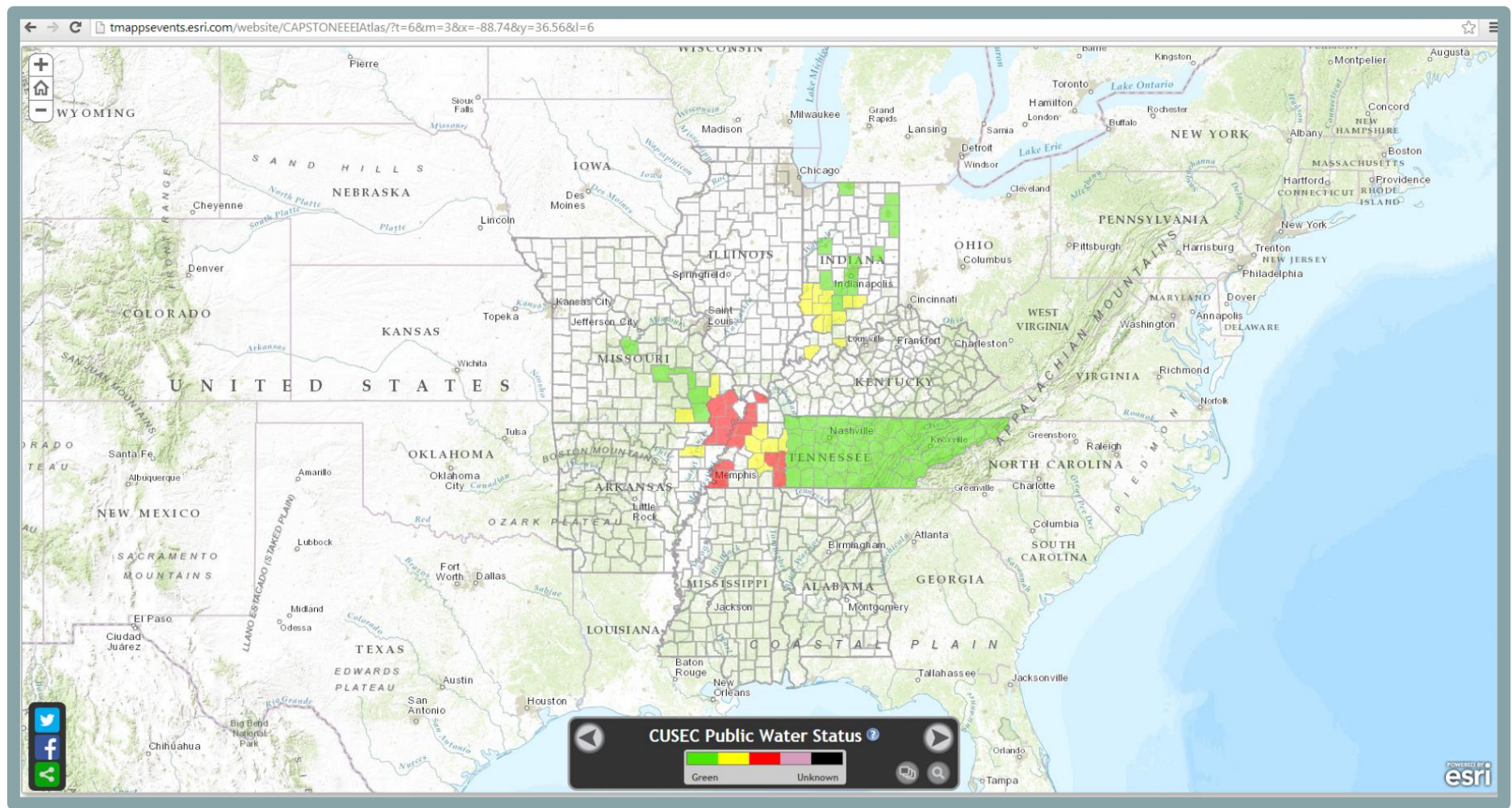


# 都市ガス (National Gas Grid Status)





# 上水道 (Public Water Grid Status)





# 道路通行可能状況 (Road Status (including Bridges))

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #3: Transportation Coordination

## CUSEC Road Transportation Status Summary

### Emergency Service Routes, Bridges, Road Closures

In the hours after the earthquake, officials in each state report numerous roadway incidents, emergency service route closures, and status of transportation resources available for deployment.

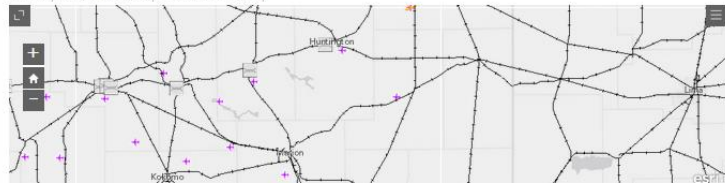
#### The webmaps include the following datasets:

1. Emergency Service Route Status
2. Transportation Infrastructure
3. ESF-1 Mission Ready Packages

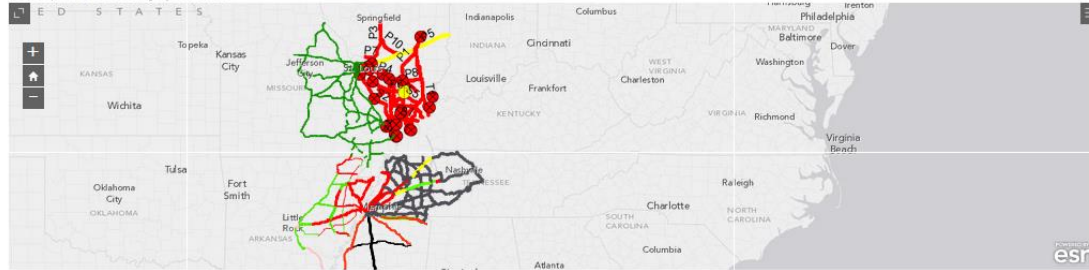
#### Decision Points/Key Actions:

1. Shut down avenues of access to impacted areas
2. Request assessment teams for bridges
3. Open transportation networks

CUSEC Capstone 2014 Exercise Transportation Infrastructure Webmap



CUSEC Capstone 2014 Exercise Emergency Service Routes



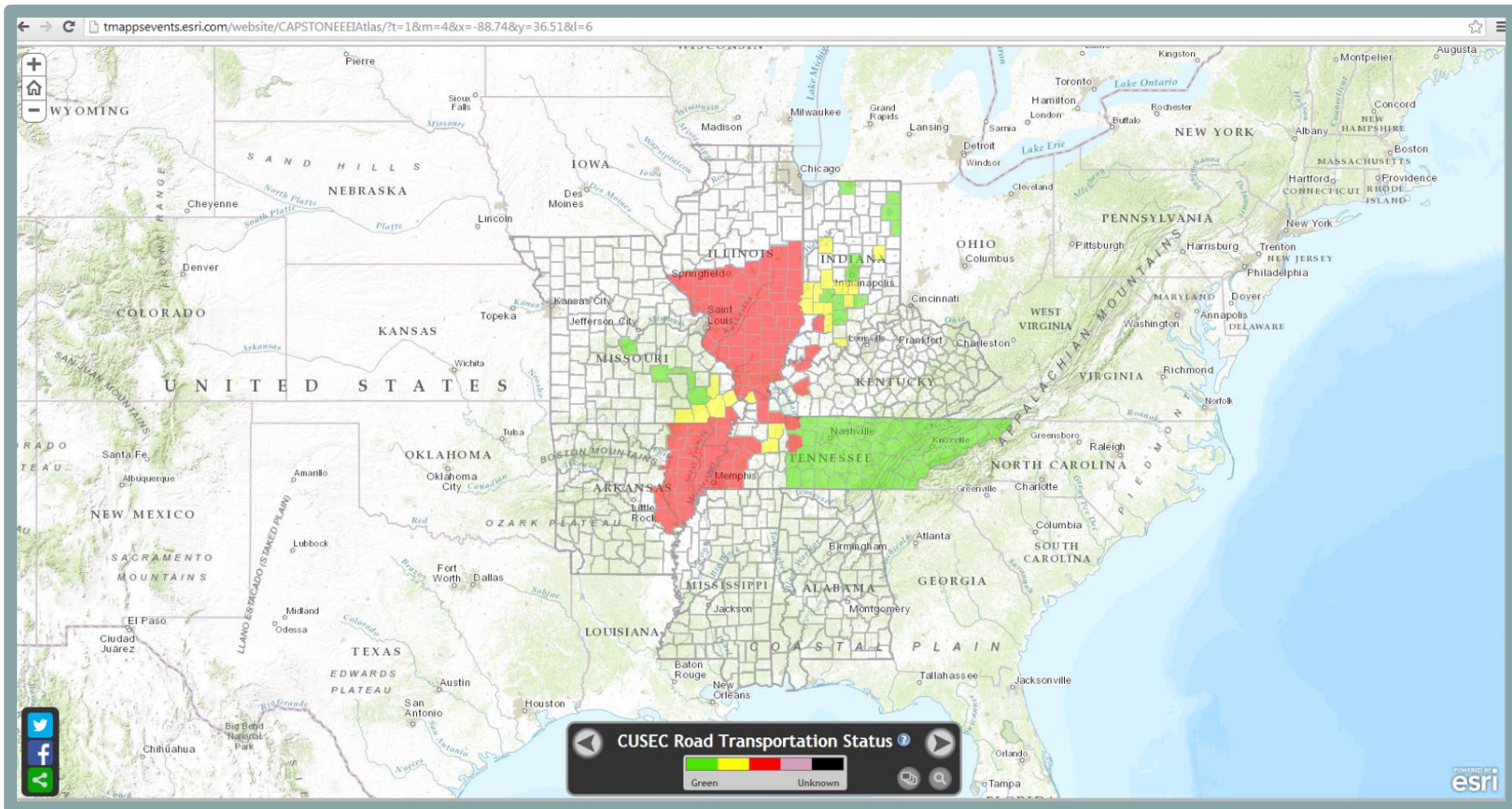
EXERCISE and ACTUAL DATA

CUSEC Capstone 2014 Exercise MASS MRP: ESF 1 Transportation





# 道路通行可能状況 (Road Status (including Bridges))







# 運河・航路 (Navigable Waterways Status)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #3: Transportation Coordination

### CUSEC Waterway Transportation Status Summary Navigable Waterways

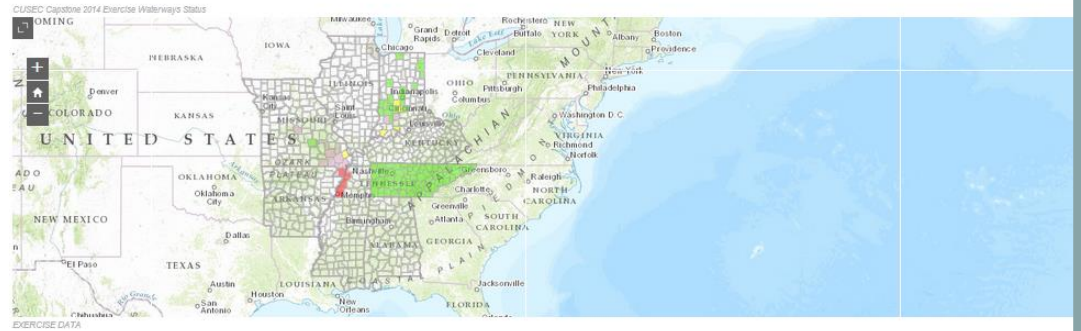
In the hours after the earthquake, officials in each state report numerous waterway incidents, including status of ports, locks, dams, bridges, boat ramps, fuel points, landslide/ground failure.

**The webmap includes the following datasets:**

1. Waterway Status
2. Navigable Inland Waterways (USACE)

**Decision Points/Key Actions:**

1. Shut down avenues of access to impacted areas
2. Request assessment teams
3. Open transportation networks





# 鉄道運行状況 (Rail Network Status (including Bridges))

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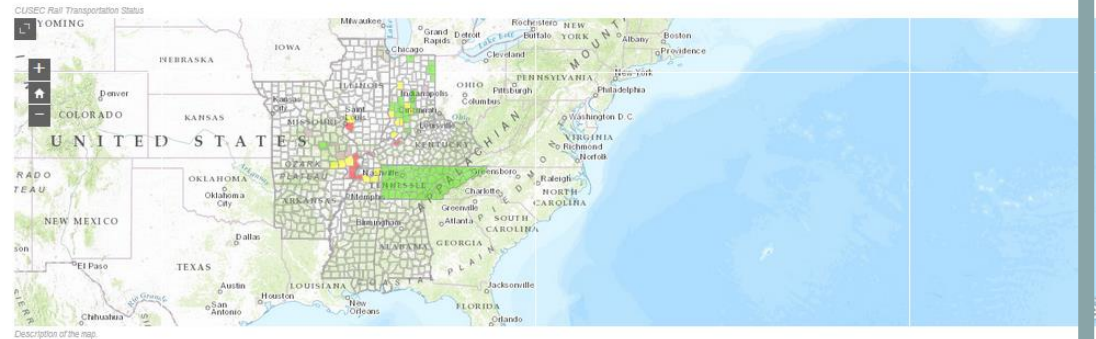
Regional Objective #3: Transportation Coordination

## CUSEC Railway Transportation Status Summary Railway Network (including bridges)

In the hours after the earthquake, officials in each state report numerous railway incidents, and update the status of rail yards, rail lines and passenger railways.

- The webmap includes the following datasets:
1. Railway Infrastructure Status
  2. Debris Removal Mission Ready Packages

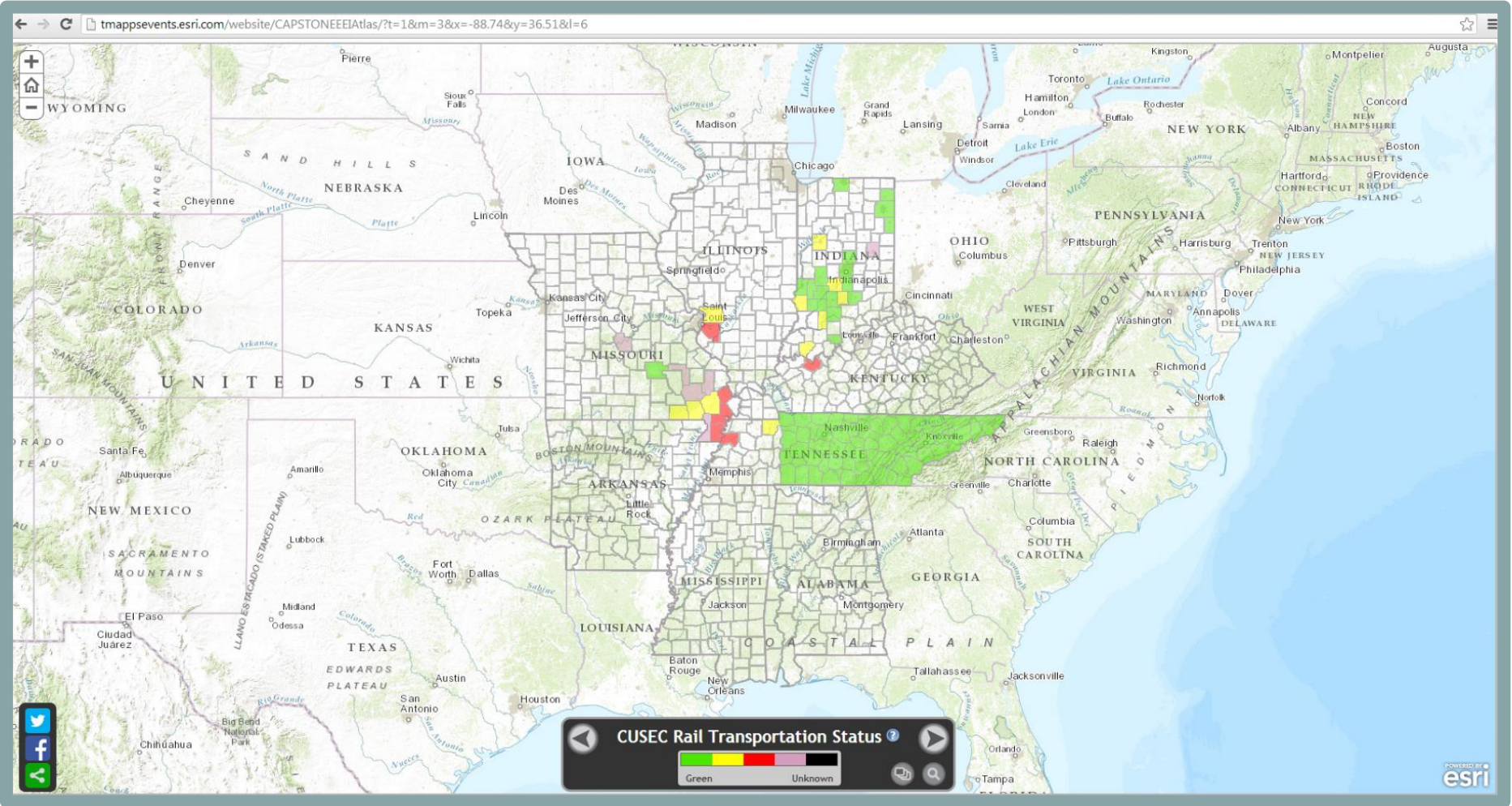
- Decision Points/Key Actions:
1. Shut down avenues of access to impacted areas
  2. Request assessment teams for rail bridges
  3. Report closed rail due to HazMat incident (train wreck)
  4. Open transportation networks





# 鉄道運行状況

## (Rail Network Status (including Bridges))





# 空港

## (Air Transportation Infrastructure Status)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #3: Transportation Coordination

### CUSEC Air Transportation Status Summary

#### Air Transportation Infrastructure

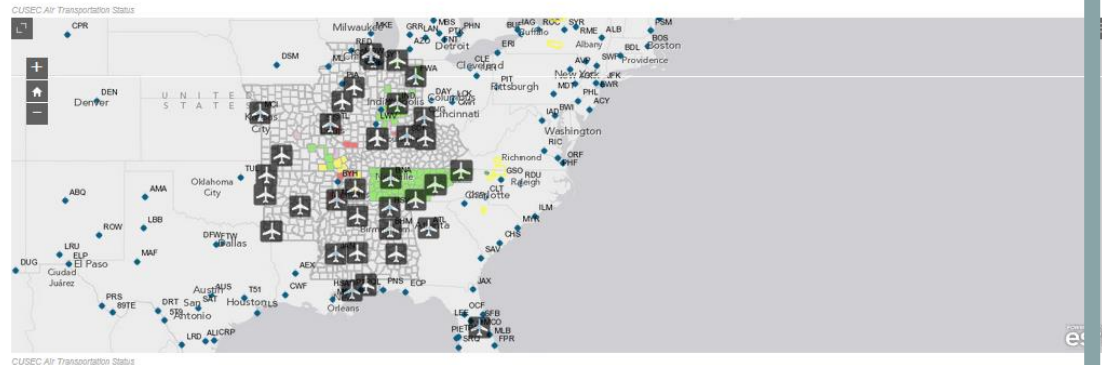
In the hours after the earthquake, officials in each state report numerous air-related incidents, resulting both from the damage to air assets and regional weather events.

#### The webmap includes the following datasets:

1. Air Transportation Status
2. FAA Airport Status (Actual)
3. Weather (NOAA/NWS Actual)
4. National Guard Air Support
5. NTAD (not displayed but available in ArcGIS Online)

#### Decision Points/Key Actions:

1. Shut down avenues of access to impacted areas
2. Request assessment teams
3. Open transportation networks





# 災害対策本部・応援人員集結拠点 (EOC & JRSOIs)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #2: Shared Situational Awareness Status

### CUSEC Staging Areas Status Summary

#### EOCs and JRSOIs

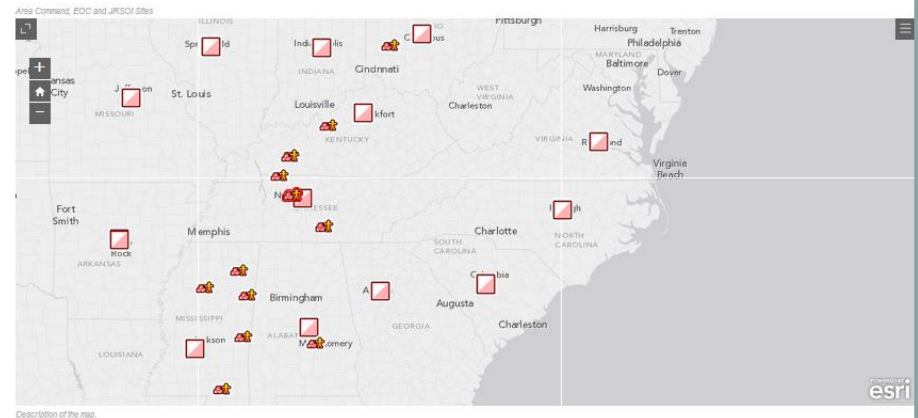
In the hours after the earthquake, state and federal agencies begin to establish area commands, JRSOIs, and PODs. The state EMAs, National Guard and FEMA Regions share this information to assist with coordination efforts in anticipation of resource allocation support across jurisdictions.

#### The webmap includes the following datasets:

1. WebEOC Fusion JRSOI Sites
2. Emergency Operations Centers

#### Decision Points/Key Actions:

1. Mobilize Command Centers
2. Report status

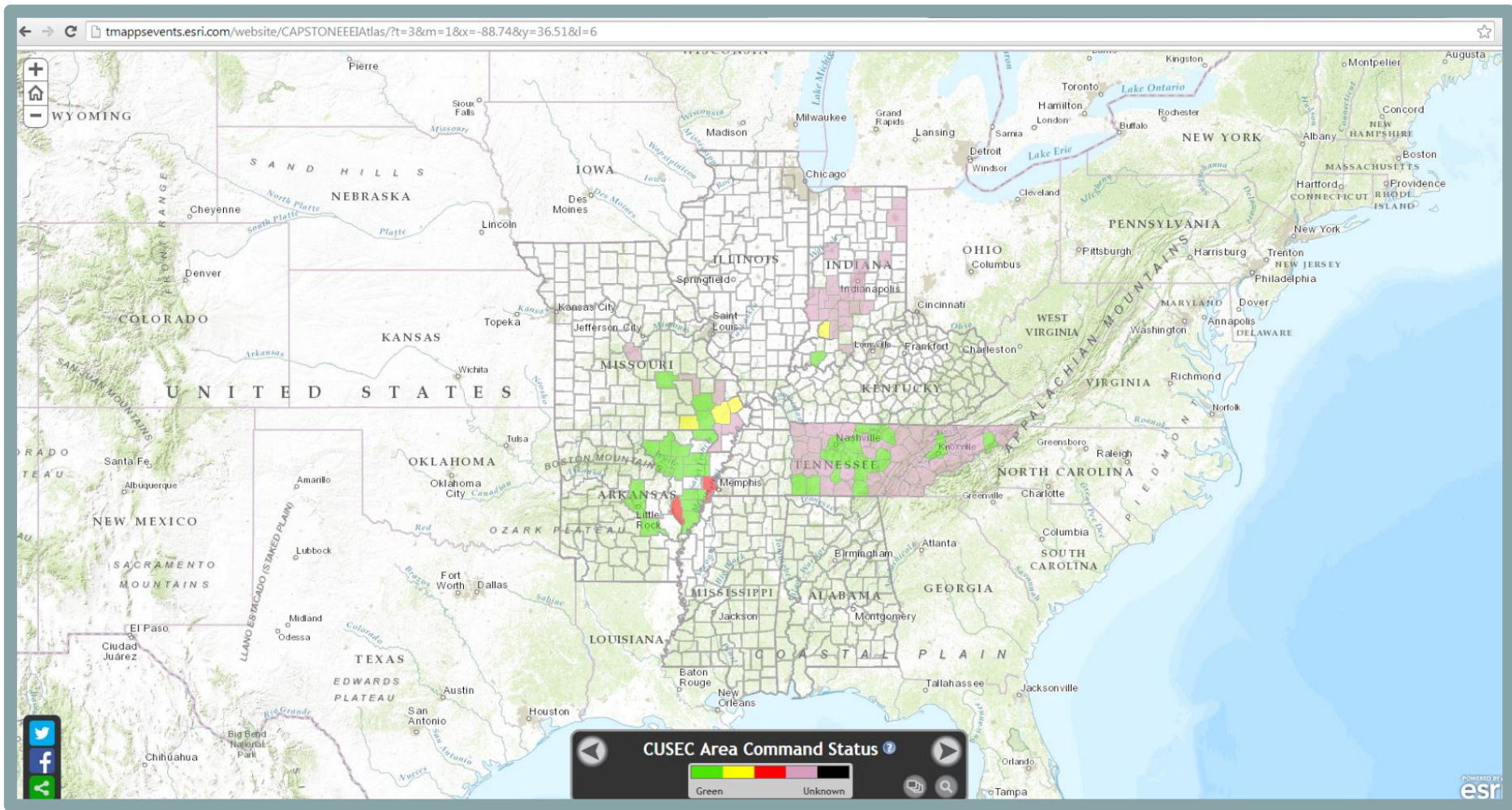


Description of the map.





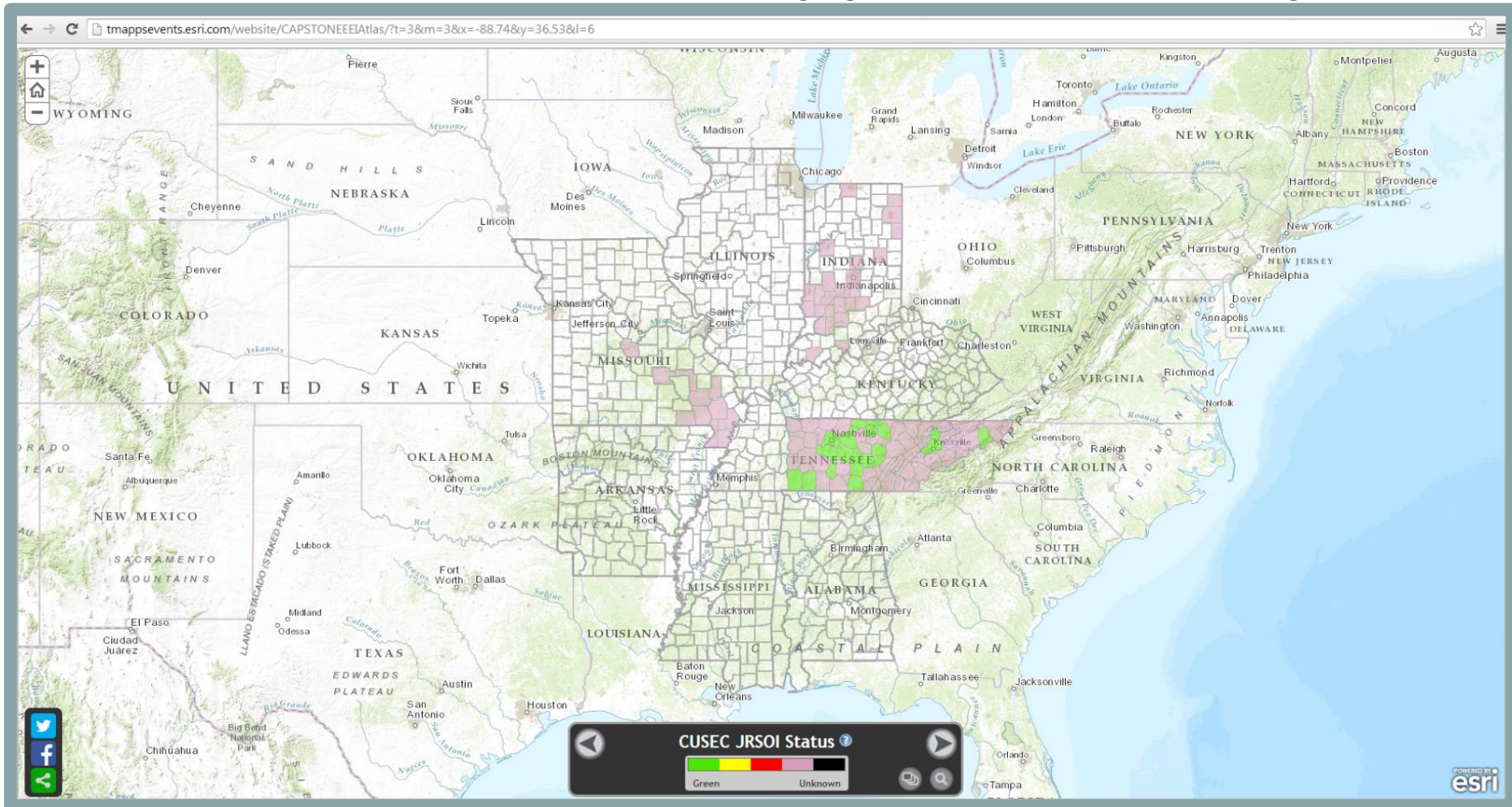
# 災害対策本部 (Area Command Location Status)





# 応援人員受付拠点 (JRSOI Sites Status)

JRSOI: Joint Reception, Staging, Onward Movement and Integration





# 車両集結拠点 (Staging Area Status)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #2: Shared Situational Awareness Status

### CUSEC Staging Areas Status Summary

#### PODs and FEMA Staging Areas

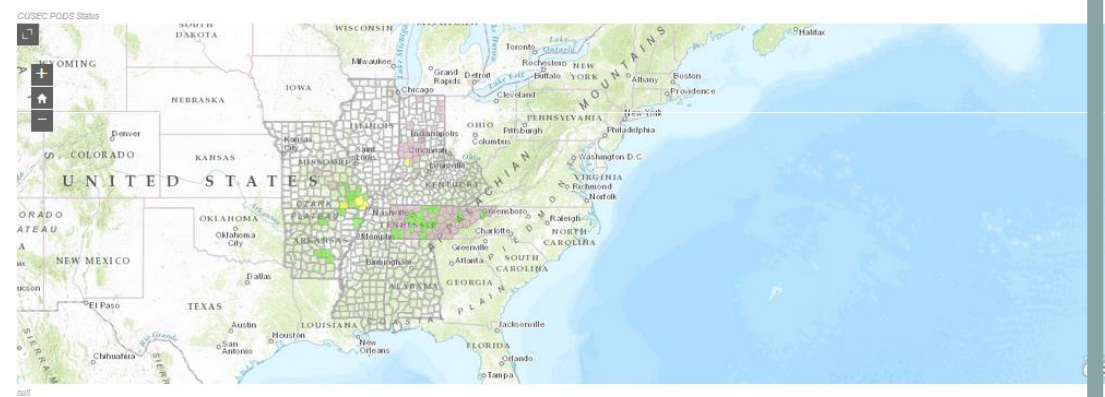
In the hours after the earthquake, state and federal agencies begin to establish area commands, JRSOs, and PODs. The state EMAs, National Guard and FEMA Regions share this information to assist with coordination efforts in anticipation of resource allocation support across jurisdictions.

#### The webmap includes the following datasets:

1. WebEOC Fusion Points of Distribution
2. FEMA Staging Areas

#### Decision Points/Key Actions:

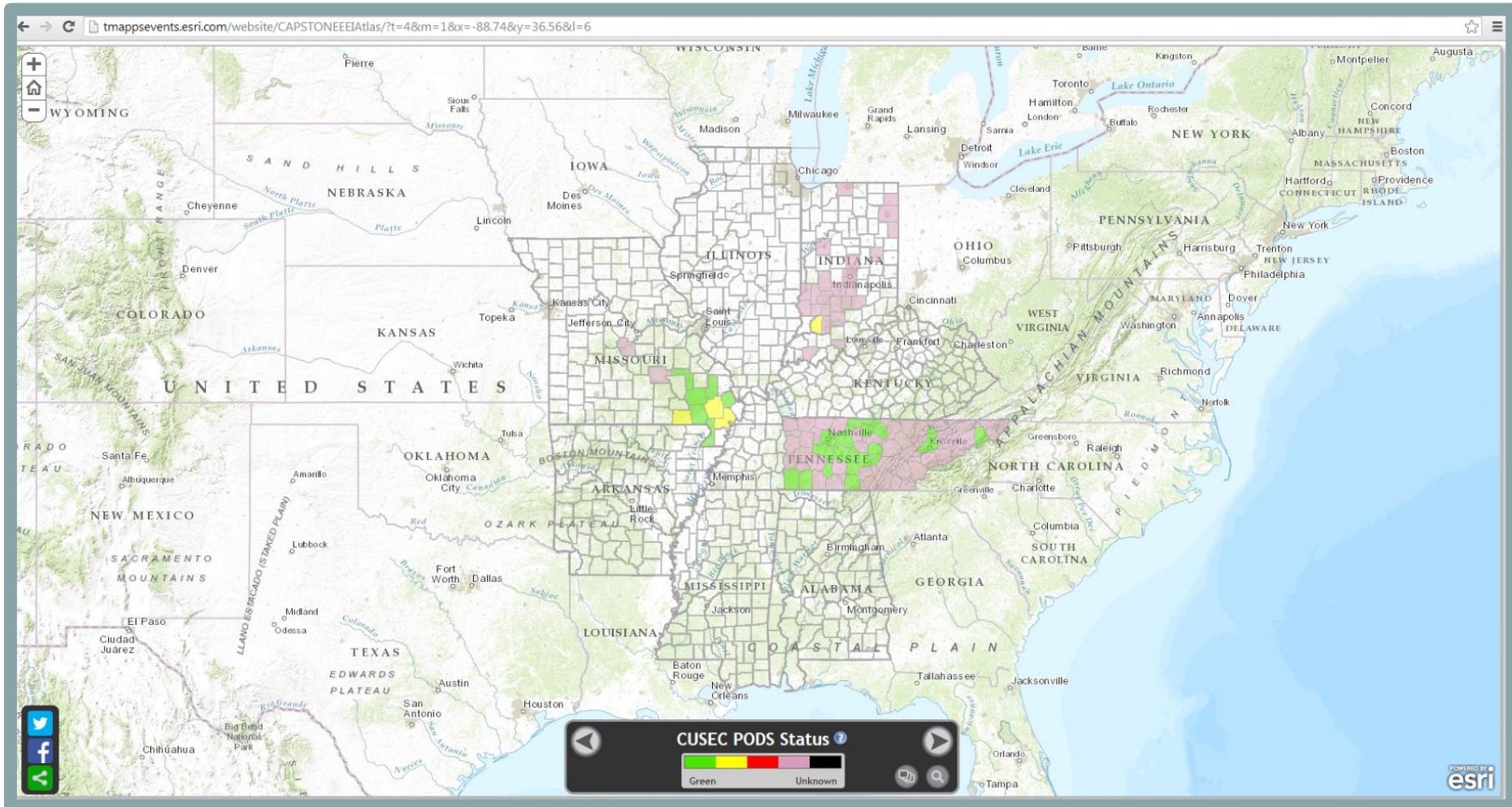
1. Mobilize Command Centers
2. Report status







# 物資配送拠点 (Points of Distribution Status)





# 被災者支援状況 (Mass Care Status: Shelters)

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #2: Shared Situational Awareness

## CUSEC Mass Care Status Summary

### Shelters

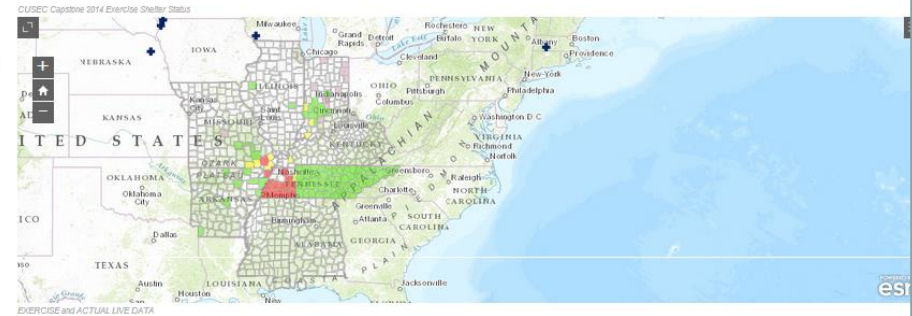
In the hours after the earthquake, officials and citizens report numerous injuries and fatalities that begin to stress the capabilities of the mass care support function.

#### The webmap includes the following datasets:

1. WebEOC Fusion State Shelters
2. Federal and American Red Cross Shelter Status

#### Decision Points/Key Actions:

1. Issue Evacuation Orders
2. Identify stress points in the mass care system
3. Identify loss of mass care facilities





# 被災者支援状況 Mass Care Status

## Injuries, Fatalities, Hospitals, Evacuation Order

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #2: Shared Situational Awareness

### CUSEC Mass Care Status Summary

Injuries, Fatalities, Hospitals, Evacuation Order Status

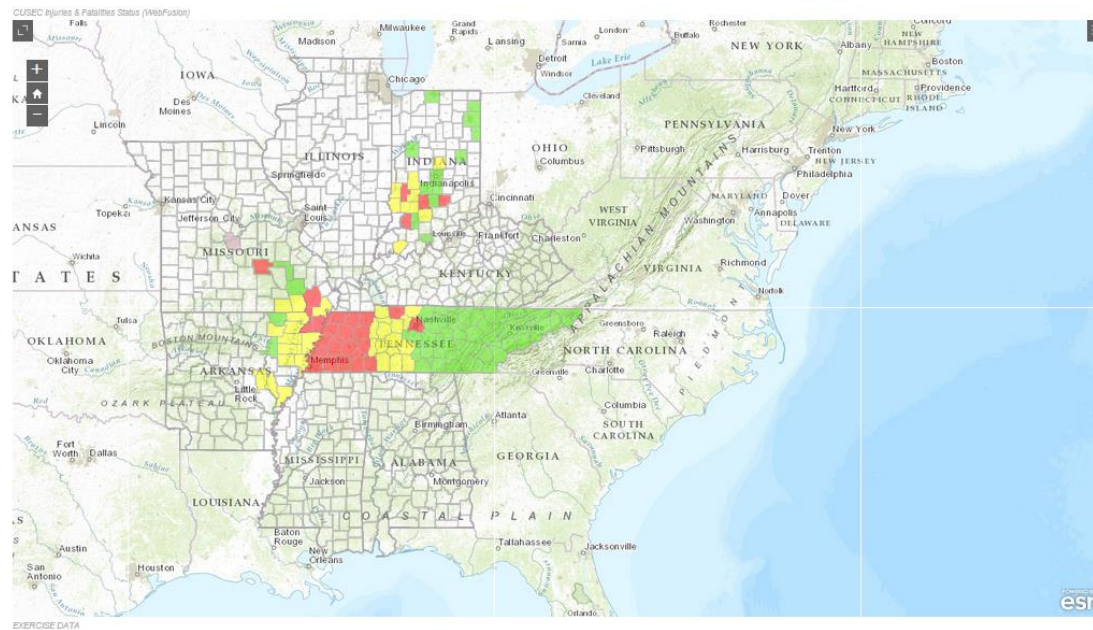
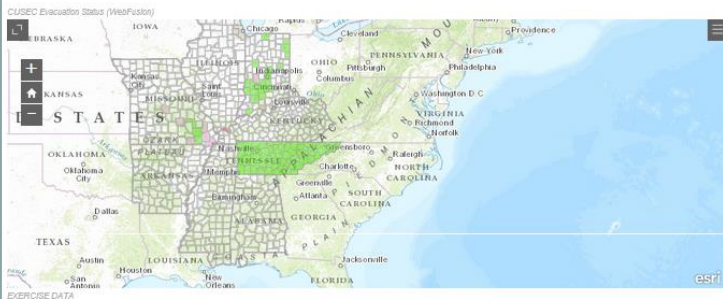
In the hours after the earthquake, officials and citizens report numerous injuries and fatalities that begin to stress the capabilities of the mass care support function.

The webmaps include the following datasets:

1. WebEOC Fusion Hospital Status
2. WebEOC Fusion Evacuation Orders
3. WebEOC Fusion Injuries and Fatalities Status
4. Pharmacy Status

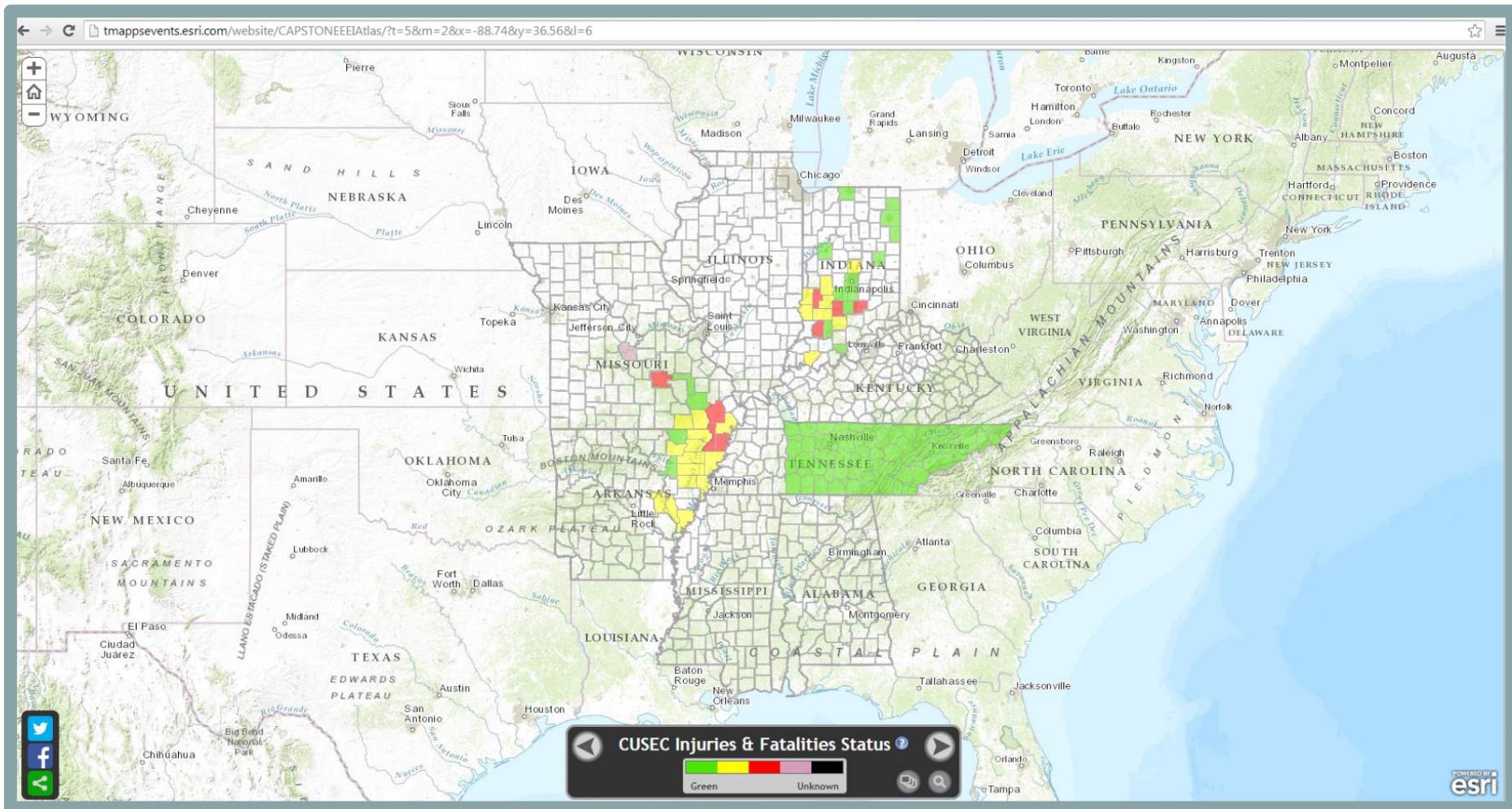
Decision Points/Key Actions:

1. Issue Evacuation Orders
2. Identify stress points in the mass care system
3. Identify loss of mass care facilities



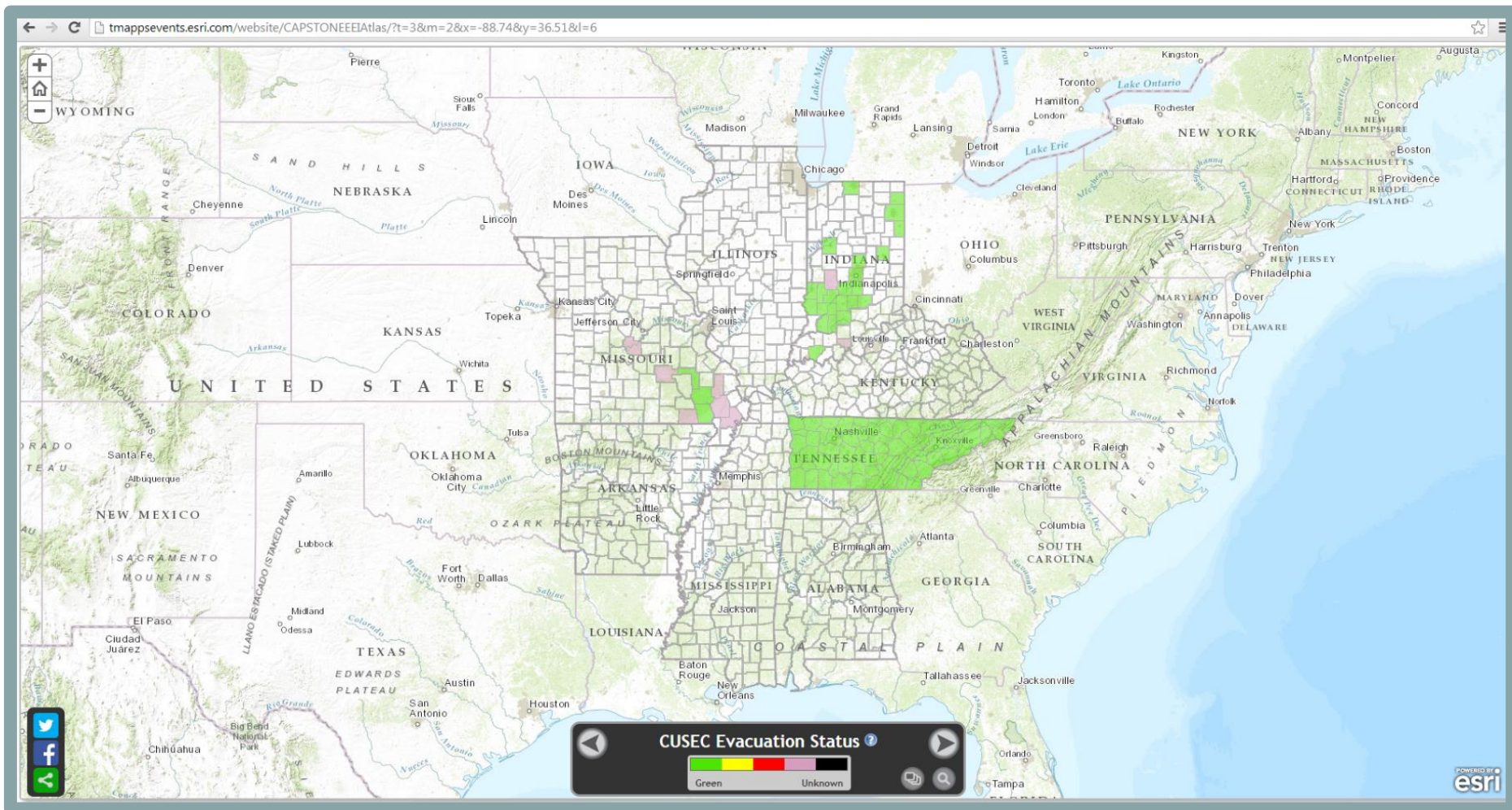


# 人の被害発生状況 (Injuries and Fatalities Status)



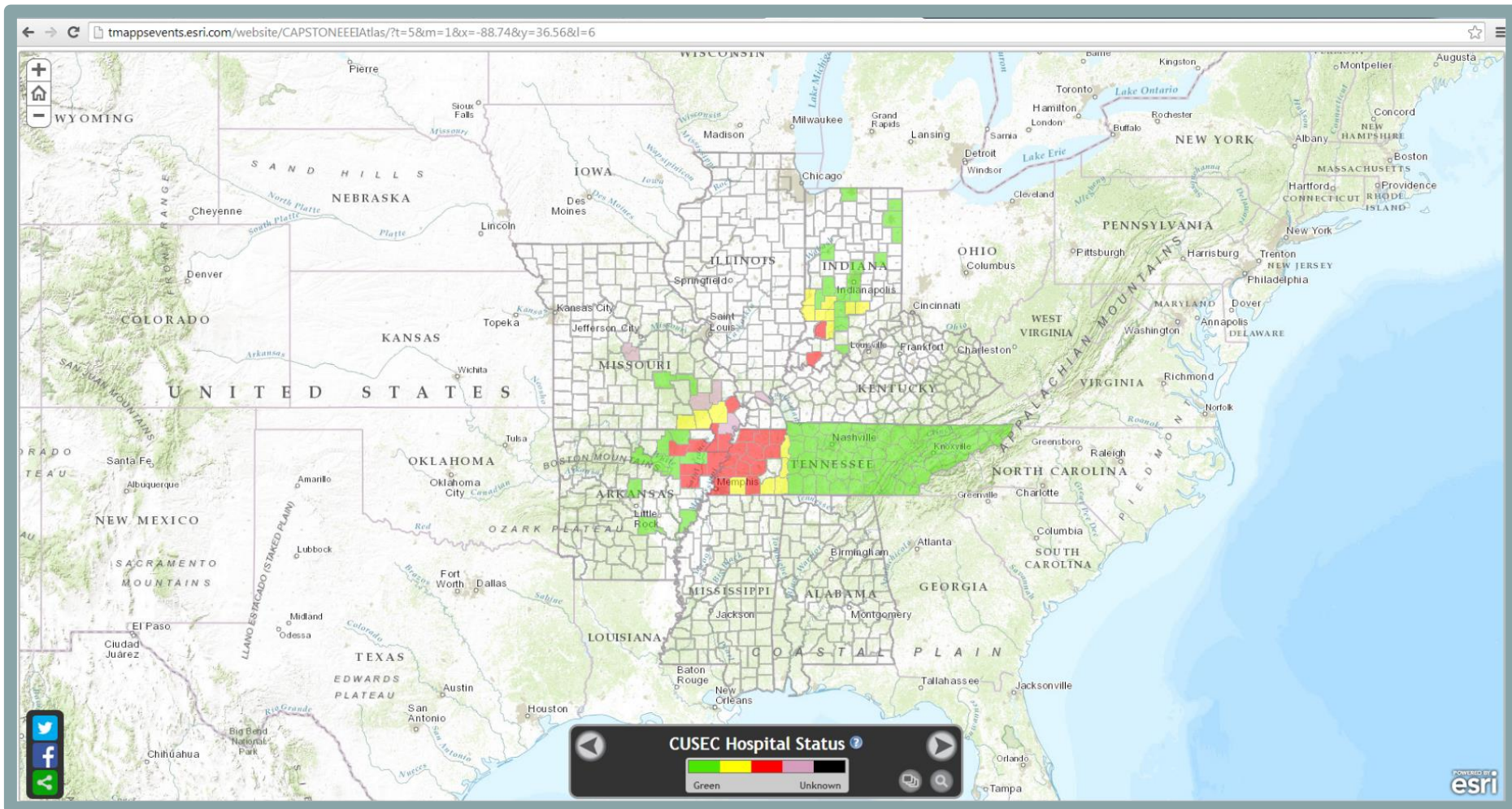


# 避難指示発令状況 (Evacuation Orders Status)





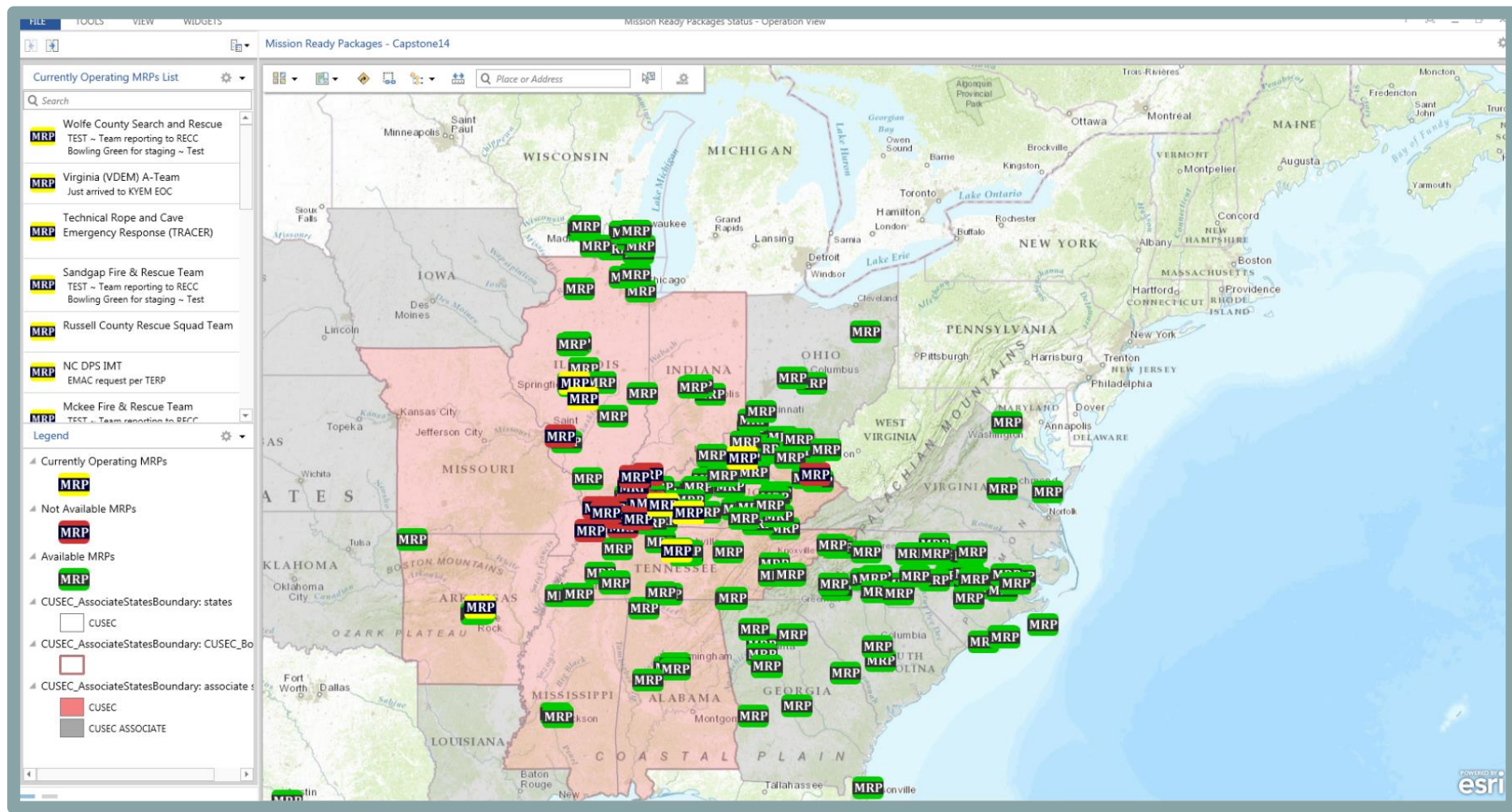
# 病院機能状況 (Hospital Status)





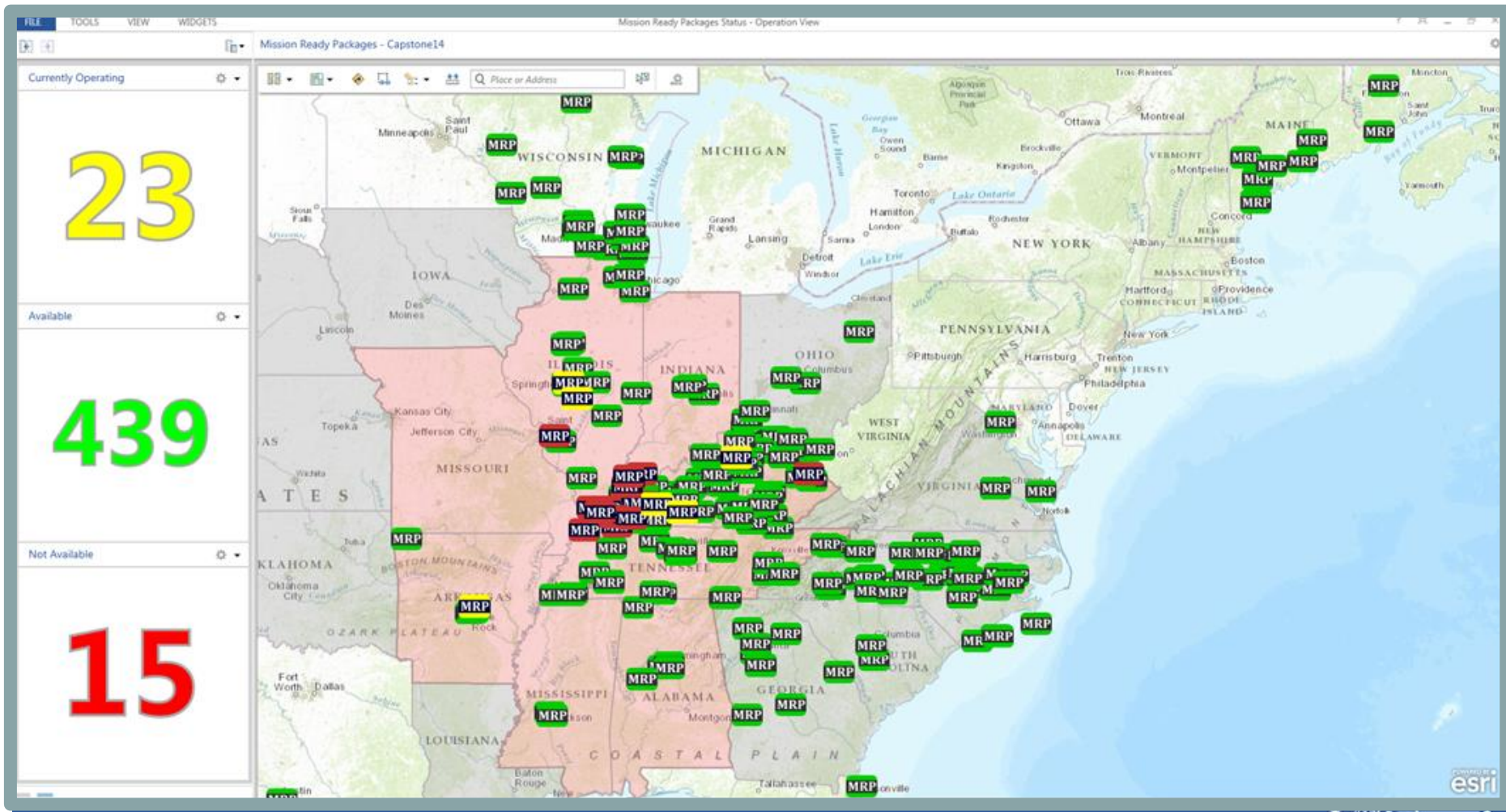
# 救急救助隊配備状況

## Mission Ready Package





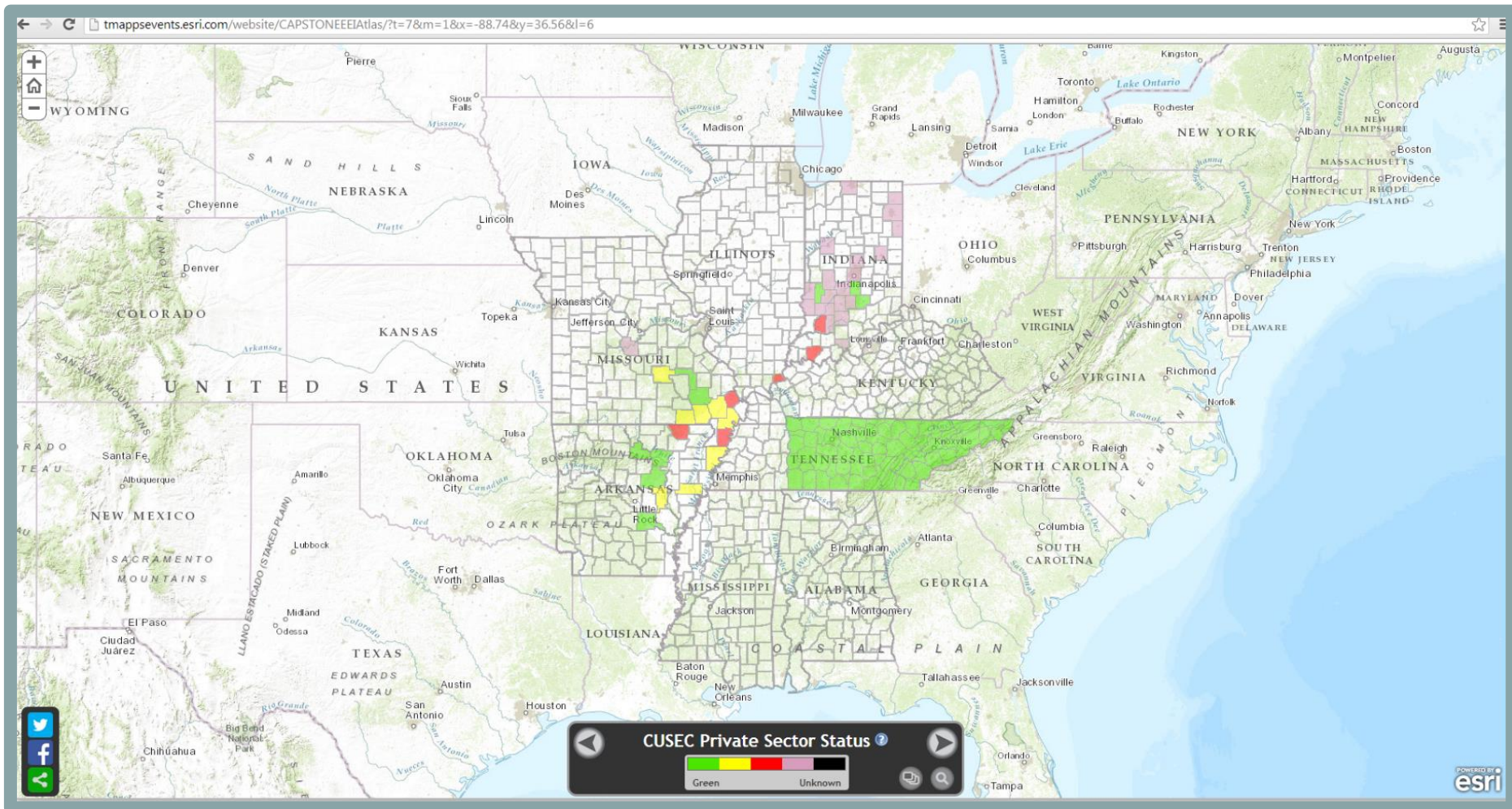
# 救急救助隊配備状況集計 Mission Ready Package







# ガソリンスタンド開設状況 (Private Sector Infrastructure Status)





# Twitter

## Social Media Monitoring

CUSEC Capstone 2014 Exercise - June 16, 2014 Briefing

Regional Objective #2: Shared Situational Awareness Status

### CUSEC Social Media Monitoring

#### Citizen Reporting

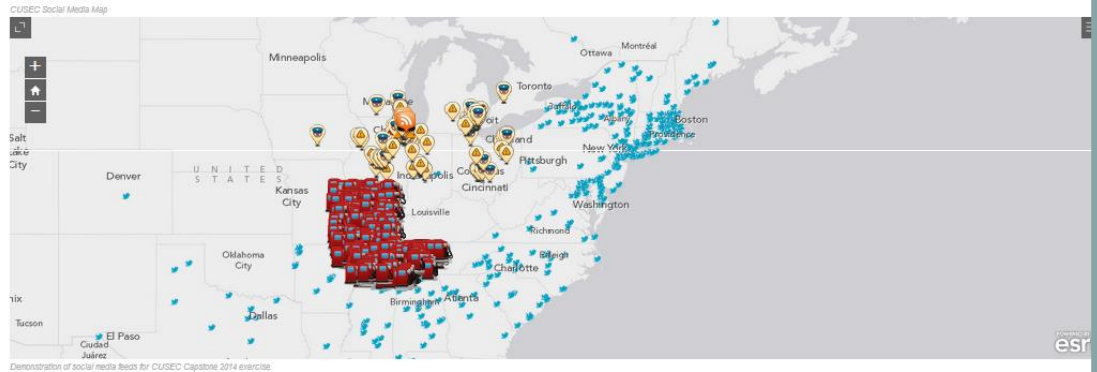
Immediately following the earthquake, citizens begin to post videos, pictures, and tweet their thoughts. Emergency management officials have no means to process this information, yet monitor the chatter for trends. During the exercise the Virtual Social Media Working Group (VSMWG) will conduct a tabletop exercise to evaluate how to augment EEI requirements with crowd-sourced data.

#### The webmap includes the following datasets:

1. Official/Vetted Twitter Feeds
2. Google Waze (traffic sentiments)
3. See Click Fix (citizen fix it requests)
4. Gas Buddy (citizen updated gas station prices)
5. USGS "Did You Feel It" Feed

#### Decision Points/Key Actions:

1. Determine what information is most useful to gather from the crowd and the most effective means of gathering the data.





# NAPA Earthquake - Aug 24, 2014

## Putting the lessons of CAPSTONE into practice





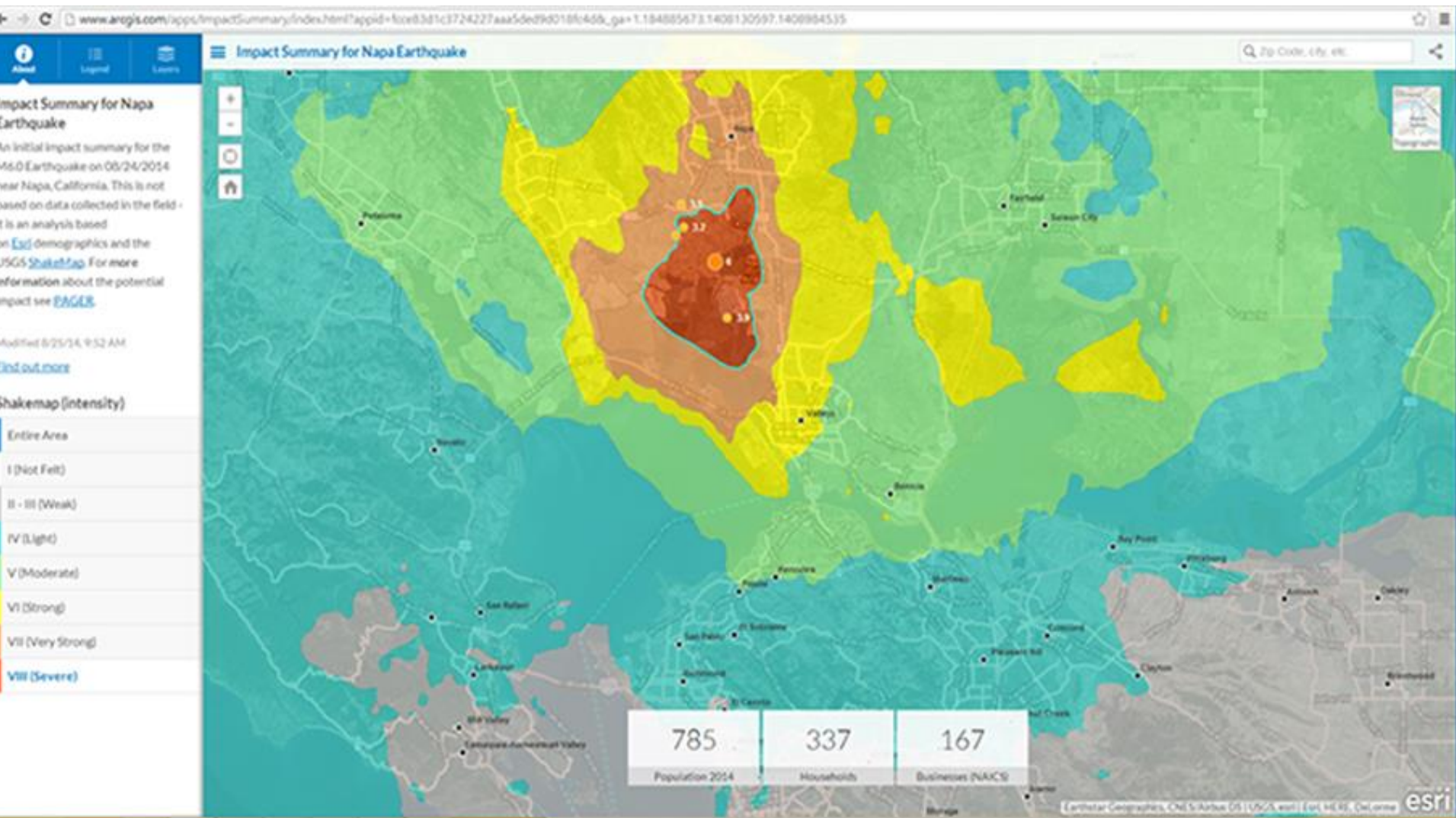
# Napa 地震の被害概要

- マグニチュード 6.0
- 負傷 172 名
- 停電 70,000 +
- 漏水 60 箇所
- 都市ガス 50+ 箇所
- 建物被害 800+ 棟
- 前回判定 103 棟
- 経済被害 \$360 Million



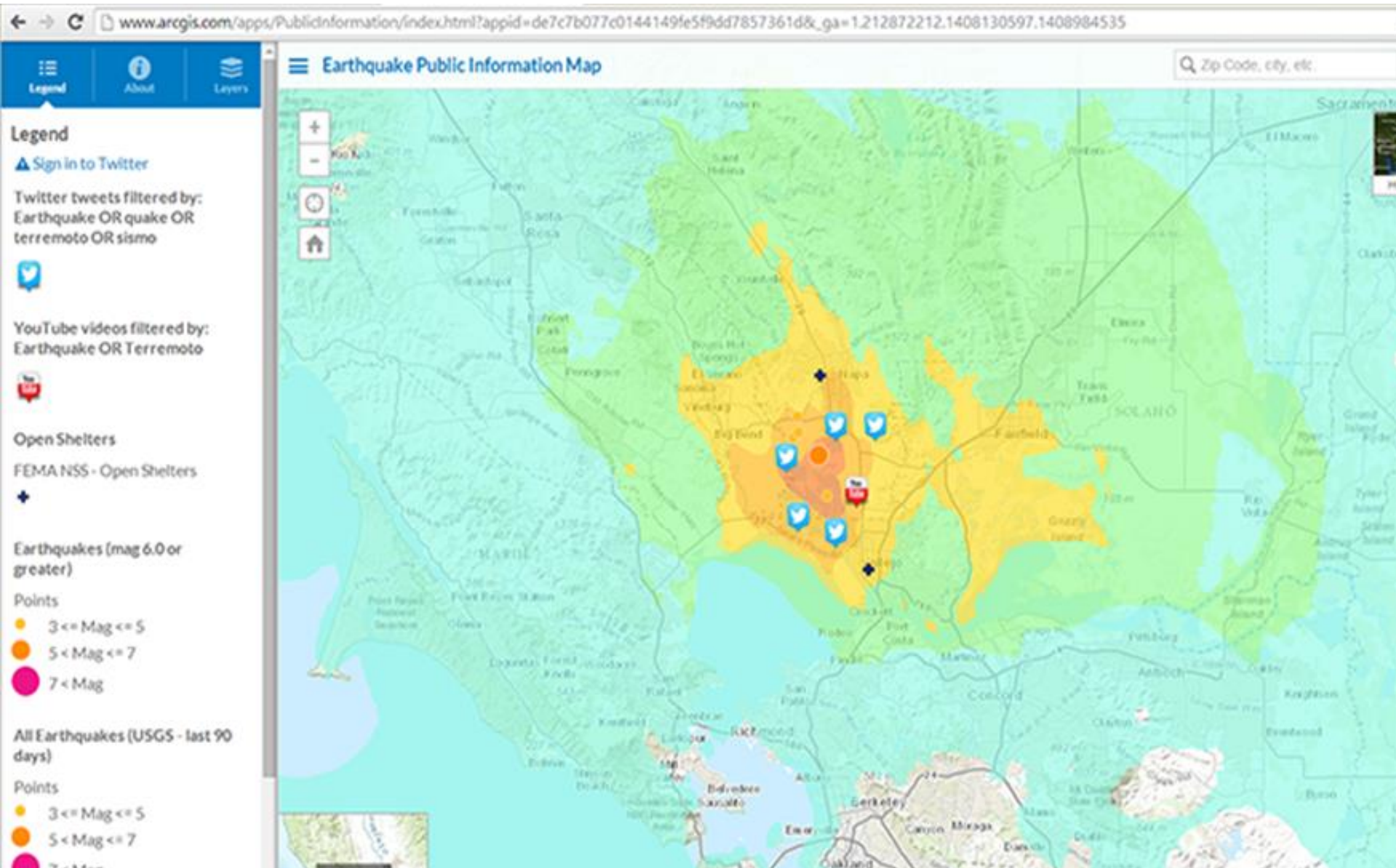


# ナパ地震の被害推定





# 市民の対応チェック





cityofnapa.maps.arcgis.com wants to use your computer's location. Allow Deny [Learn more](#)

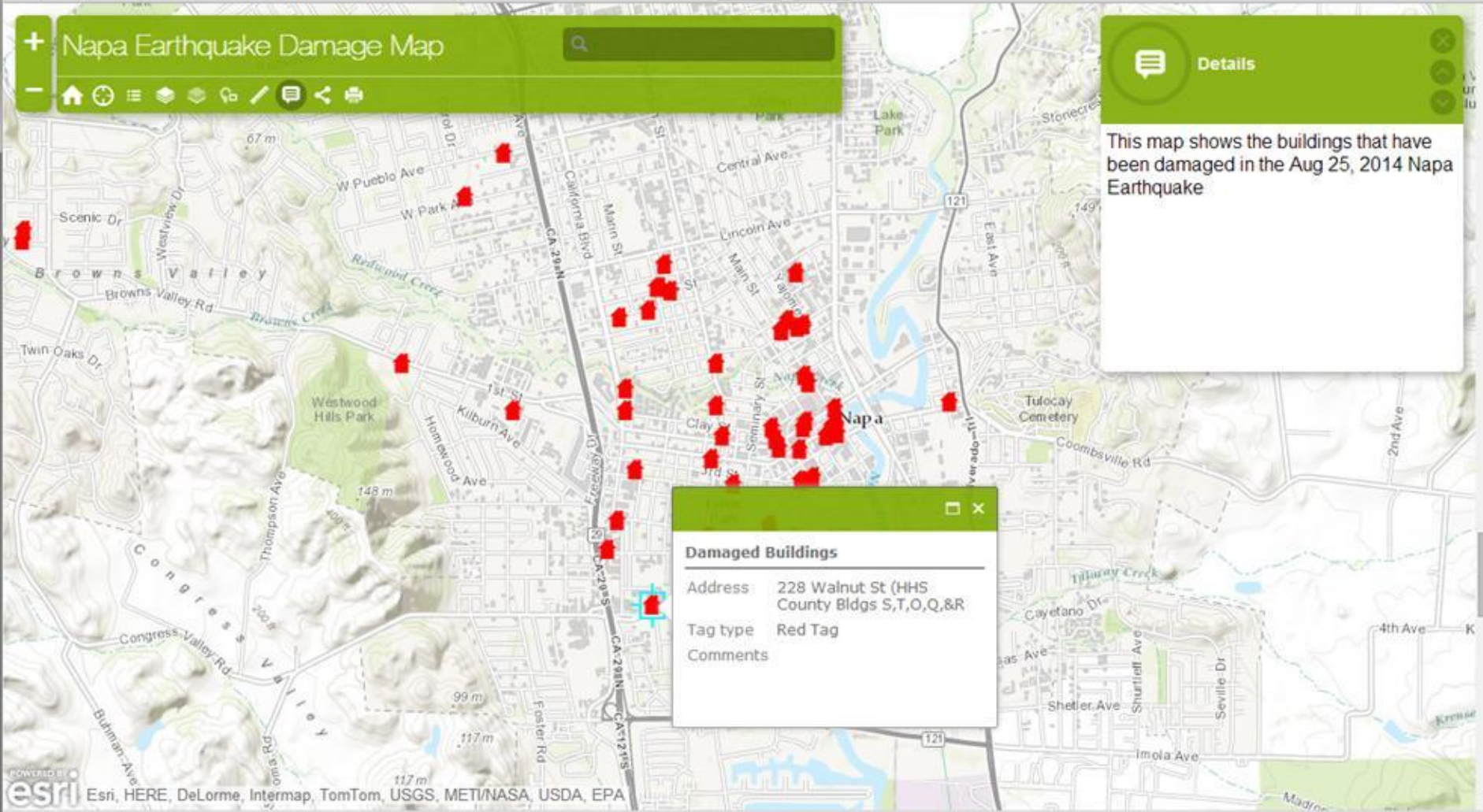
**Napa Earthquake Damage Map**

Search:

Map navigation icons: Home, Full Screen, Layers, Settings, Print, Measure, Copy, Share, Previous View, Next View

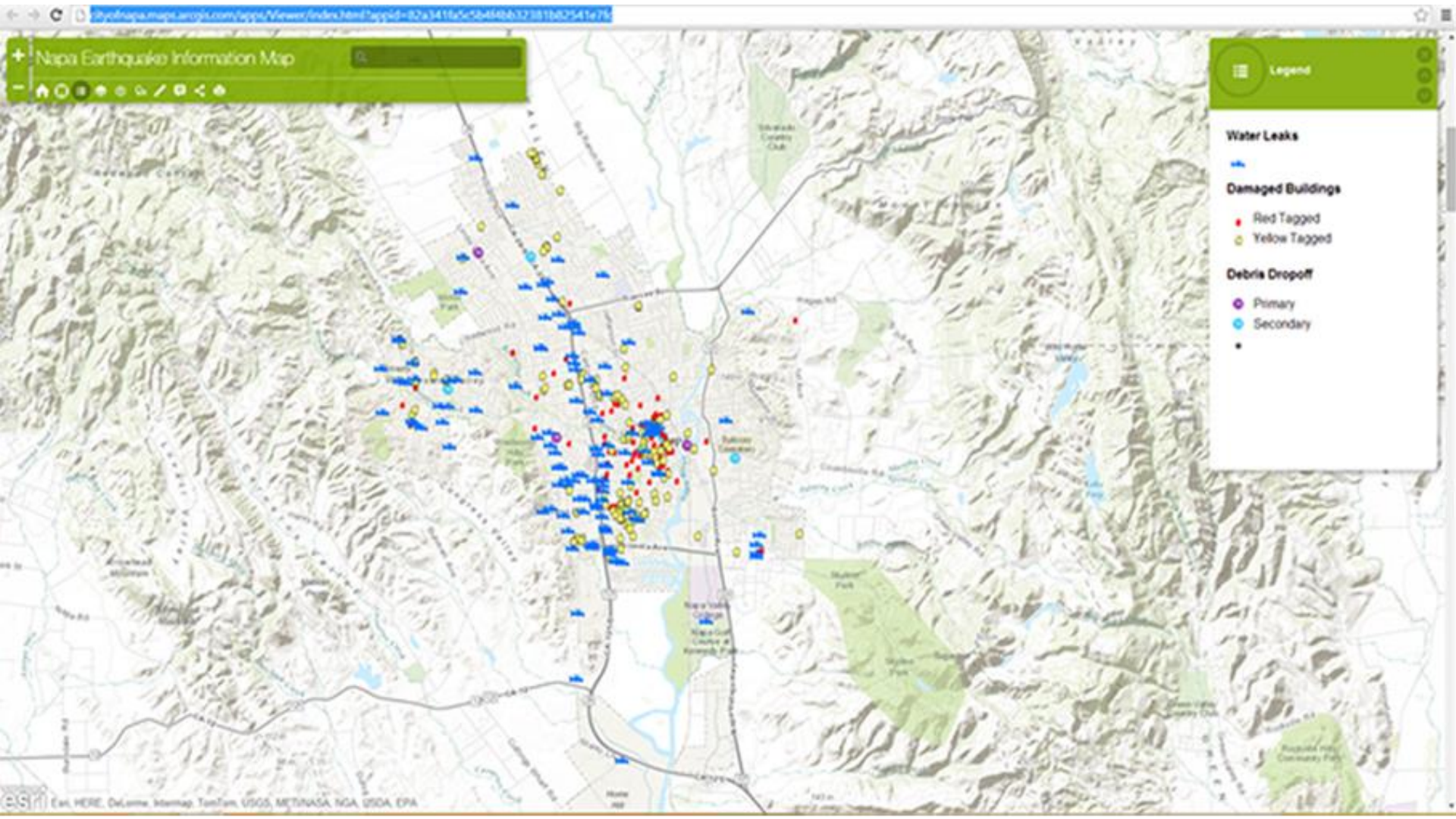
**Details**

This map shows the buildings that have been damaged in the Aug 25, 2014 Napa Earthquake



**Damaged Buildings**

Address	228 Walnut St (HHS County Bldgs S,T,O,Q,&R)
Tag type	Red Tag
Comments	







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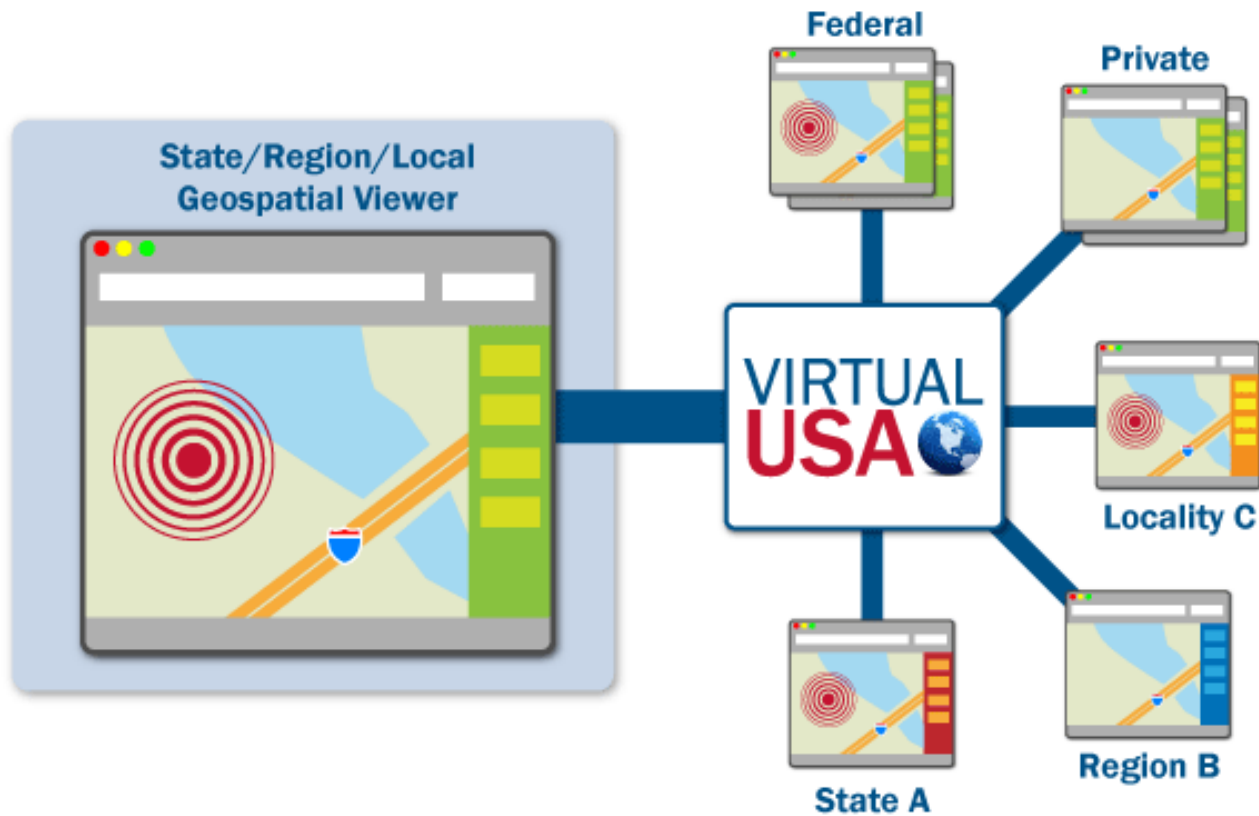


# NISCとは

- 2012年6月に5つの団体で協定結成
  - オレゴン州, カリフォルニア州, ヴァージニア州, ノースキャロライナ州シャーロット市, ヴァージニア州シャーロットビル市
  - 2012年 53団体, 2014年現在, 産官学民の73団体
  - 大統領府のIMIS-SC (Incident Management Information Sharing Subcommittee)の座長
- 目的
  - あらゆるレベルの政府における危機・災害対応時の情報共有と相互運用性の向上
  - 危機管理関係のデータの所有者, 管理者, 使用者が連携し, 体制, 開発, 技術・データプロセス・ベストプラクティスの共有を行う
  - Sharing, connecting, innovating, and leadingの4側面



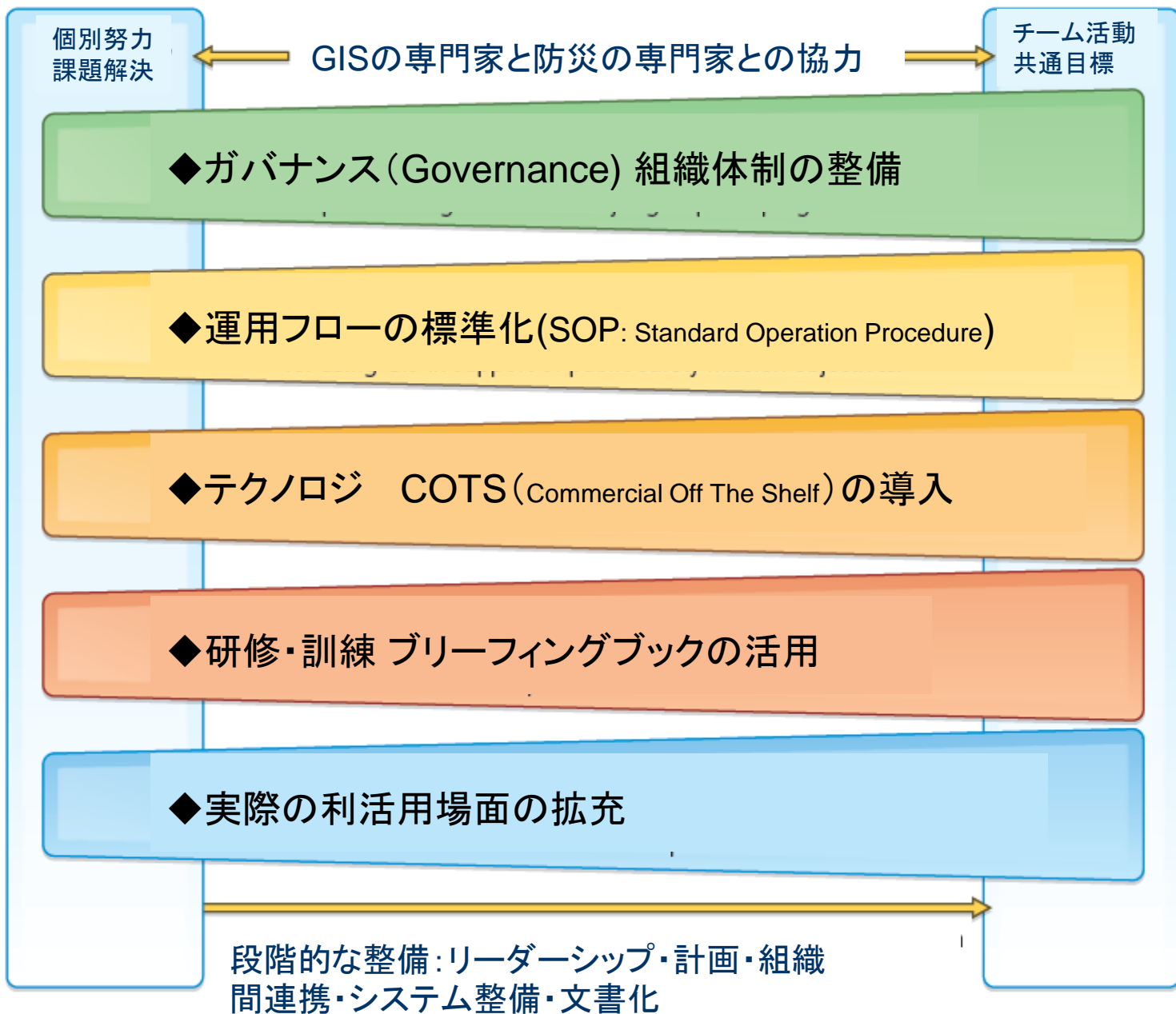
# Virtual USA





# Virtual USA

- Virtual USAは防災の実務家に新しい活動と協働の仕方をもたらした。
- 元々、災害対応実務家は互いに結びつきが弱く、技術的な知識を共有することは容易ではなかった。管轄外のところで正しい情報を手に入れるのに苦労していた。広域連携は非常に困難だった。
- 複数の自治体にまたがる大規模な災害は発生すると、各自治体の災对本部の開設状況、避難所の状況、避難路の状況、民間が保有する飲料水の所在などが共有されるべき情報である。しかし情報共有は信頼を前提としている。担当者はもらったデータを信用し、提供するデータに責任を元粘らない。担当者はその責任を強く時間している。
- Virtual USAはそうした責任に応えることを目標に一から構築された。
- 関係者が一緒になって、以下を定義した。
  - 共有さえるべき記録方法、記述方法
  - 情報共有のための記述的なツール
  - 情報教諭のための標準を設定するための合意時候
  - SCに加入するべきパートナー
  - システムへのアクセスの制御方法
- Virtual USAは実務家に対して、共有されるべき情報の透明性、だれが、どこで、いつまで情報にアクセスできるかのアクセス権の制御、を提供した。すべての共有されるべき情報についてコンタクトパーソンがリストされ、疑問があればたれに聞けばいいかが明示された。
- このサイトはプロタイプで、改良された地理空間情報を処理する技術が全国に広まり、経験が蓄積されるにつれ、Virtual USAシステムは進化し、成熟している。





# 情報共有成功のための5つの要素

## ◆ガバナンス

NISC(National Information Sharing Consortium) の設置による共同訓練体制

## ◆運用フローの標準化

共有すべき18種類の情報の同定  
カウンティ単位で赤黄緑の状況表示

## ◆テクノロジー

COTS (Commercial Off The Shelf) の導入により導入期間、保守費用、リスクを低減し、COTSテクノロジーの進化に伴い、たえず世界のBest Practiceノウハウを享受し続ける

## ◆トレーニング

ブリーフィングブックによる研修・訓練

## ◆活用

小規模災害から大規模災害まで多くの場面で実際に利用する