

**Society of American Military Engineers (NoVA)**  
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# **Pre-Event Community Resiliency through Public-Private Partnerships**

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# BASED ON WORK FROM

## The Northern Virginia

### Recovery Resource Initiative

- Grant Funding: FY2008 & FY2009 UASI Awards to Northern Virginia Emergency Response System (NVERS)
- Grant Scope: To address primary issues, challenges and realities of recovery resource management.
- Lead: Arlington County

# RESILIENCE: DEFINITIONS

1913 Webster's Dictionary, resilience is:

**“The act of springing back, rebounding, or resiling, as the resilience of a ball or of sound.”**

# MORE DEFINITIONS . . .

“The power or inherent property of returning to the form from which it is bent, stretched, compressed, or twisted.” – *of objects or substances*

“The power or ability to recover quickly from a setback, depression, illness, overwork, or other adversity.” – *of people*

“The ability of a system to keep working with one or more of its components malfunctioning. Also called Fault Tolerance.” – *of systems*

# RESILIENCY:

## TAKE A PUNCH. RECOVER.

- How fast ?
- With how much outside assistance ?
- With what lasting effects ?



**FACTS ABOUT  
DISASTER COMMUNITY  
RESILIENCY AND RECOVERY**

# FACT # 1

**GOOD MEASURE OF PRE-EVENT RESILIENCY**

**=**

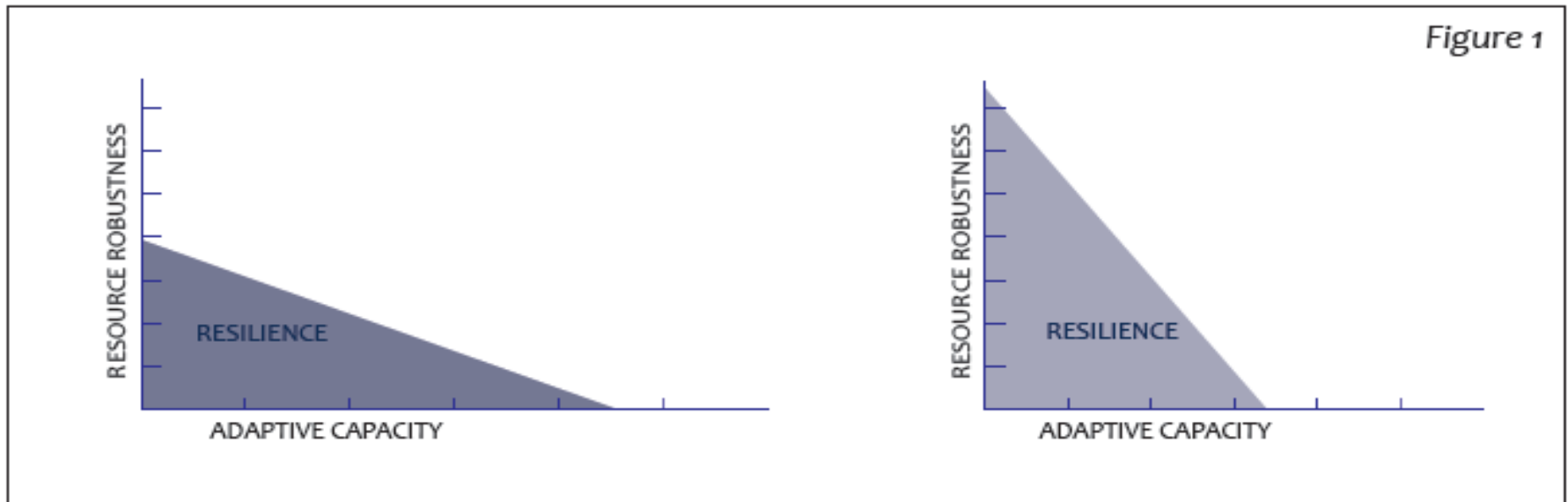
**LENGTH OF POST-EVENT RECOVERY TIME**

## **FACT #2**

**Recovery is an pre-event  
economic/resource conversation.**

**Therefore, so is predicting resiliency.**

# Community Resilience seems to be a function of resources and adaptability.



**Adaptive Capacity and Resource Robustness appear to be inversely related (to a point).**

**SOURCE:** "Community Resilience: A function of resources and adaptability" (white paper). Institute for National Security and Counterterrorism, Syracuse University. Longstaff, Armstrong, Perrin, et al. June 2010.

# RECOVERY TIME IS AFFECTED BY

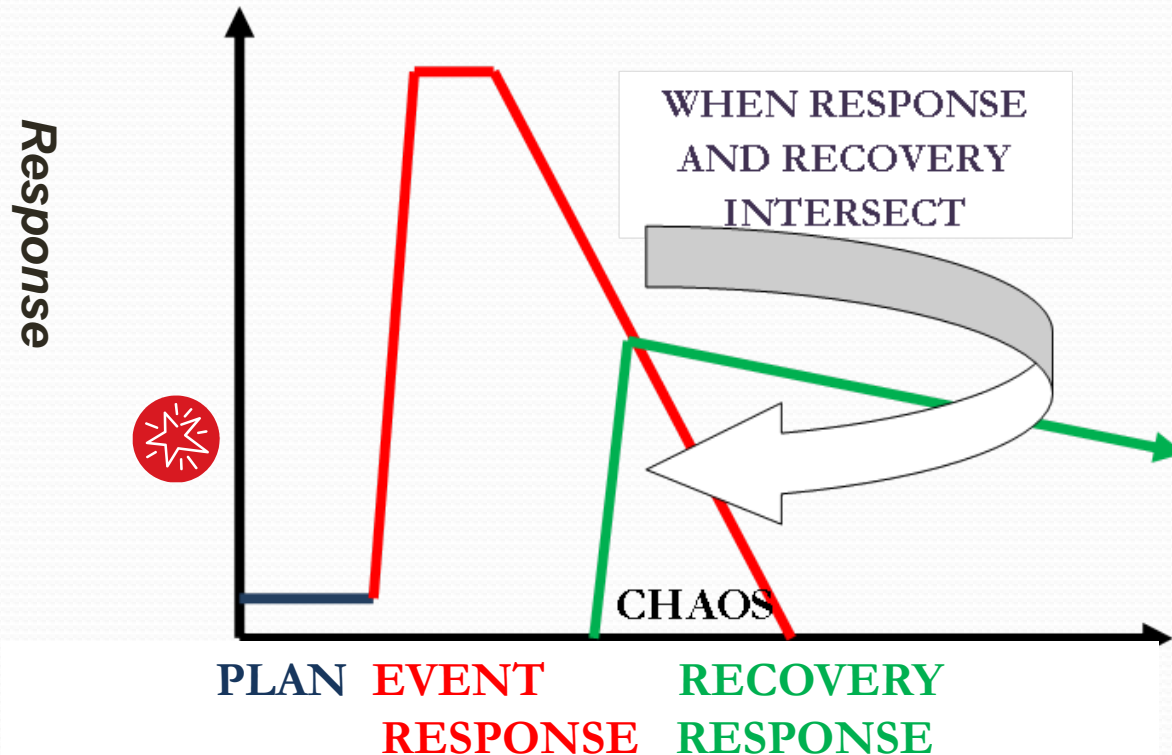
Also, components of resiliency . . .

## *Recovery Time*

<i>Affects</i>	<i>Longer</i>	<i>Shorter</i>
Average Income	Lowest	Highest
Buildings Mitigated	None	Extensive
Business Size	Smaller	Larger
Oriented Economy-Mostly	Imports	Exports
Infrastructure Mitigated	None	Extensive
Transportation Mitigated	None	Extensive
Recovery Planning	None	Extensive
Business Retention	Leave	Stay

# FACT #3

## PRE-EVENT RESILIENCY AND CONCENTRATED RESOURCE READINESS AFFECT RECOVERY TIME



# **FACT # 4**

**GOVERNMENT  
CANNOT PROVIDE LEVEL OF  
RECOVERY RESOURCES  
NEEDED**

# **RECOVERY RESOURCES**

**NOT AN INVENTORY CONVERSATION.**

**IT IS A  
SUPPLY CHAIN/DISTRIBUTION  
CONVERSATION.**

# Why Involve the Private Sector in Pre-Event Recovery Planning?

**RECOVERY IS AN  
ECONOMIC/RESOURCE ISSUE.**

**GOVERNMENT CANNOT PROVIDE  
LEVEL OF RESROUCES NEEDED.**

# PROVEN RECOVERY EXPERTISE

## Different Concentrations of Efforts:

- *Public Sector* = Response and Preparedness
- *Private Sector* (For and Not-For) = Recovery/  
Continuity

# George Washington University Survey

“In your opinion, how much responsibility does each of these groups have for ensuring the safety and security of your community and the businesses that support it (based on a 5-point Likert scale ranging from 1—not much responsibility to 5—a key responsibility?)”.

1. Local Police, Fire Department and First Responders	4.79
2. City and County government	4.57
3. <b>The businesses and private citizens themselves</b>	<b>4.42</b>
4. State government and state agencies	4.28
5. The National Guard and U.S. military	4.04
6. Federal agencies like FEMA and DHS	4.03
7. The President and Congress	3.69

Source - The Influence of Collaborative Partnerships on Private Sector Preparedness and Continuity Planning, W. Michael Dunaway and Gregory L. Shaw. George Washington University, [wmdunaway@usa.net](mailto:wmdunaway@usa.net)

# INVESTED IN COMMUNITY RECOVERY

<i>COMPANY</i>	<i>STORES</i>	<i>ANNUAL \$</i>	<i>\$ PER WK/STORE</i>
WAL-MART	9,000	\$419 BILLION	\$895,000
TARGET	1,755	\$ 67 BILLION	\$734,000
7-11	4531	\$16 BILLION	\$ 68,000

Source: 2010 Company Investor information

# THEY OWN THE INFRASTRUCTURE

**85 percent** of the nation's critical infrastructure is owned by the private sector.

It is vital that the public and private sectors **work together to protect these assets.**

Source: "Critical Infrastructure Protection: Progress Coordinating Government and Private Sector Efforts Varies by Sectors' Characteristics GAO-07-39 October 16, 2006

# ROBUST DELIVERY CHAINS

<i>MODE</i>	<i>MILES/YR</i>	<i>TONS MOVED/YR</i>	<i>Lbs/U.S. PERSON/YR</i>
Rail Freight	3.4 BILLION	2 BILLION	6,410 POUNDS
Trucking	432.9 BILLION	11 BILLION	35,256 POUNDS
<b>TOTALS</b>	<b>436.3 BILLION</b>	<b>13 BILLION</b>	<b>41,666 POUNDS</b>

Sources: American Trucking Association and Association of American Railroads.

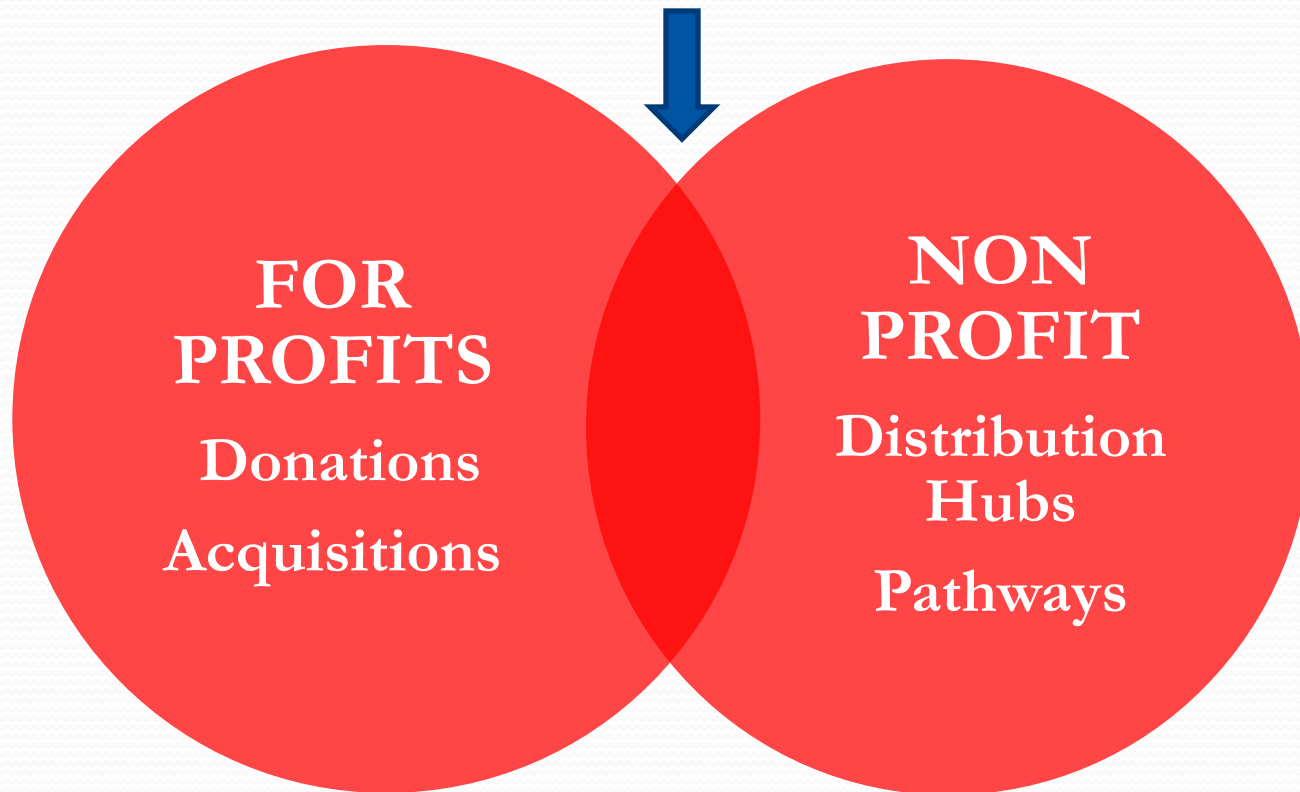
# WHAT WAS CONFIRMED?

There is an **already existing network** of for and not-for profit organization partnerships that work **seamlessly every day providing essential goods and life supporting services** to the community.

Exposing and planning within these distribution pathways pre-event **eliminates reconstructing them and/or inventing new ones** after an event

# Powerful Interconnectivity Exists

Leverage: Expose Where They Intersect



**SIMPLE?**

**SO . . . WHAT'S MISSING?**

**COMMUNICATION**

**COORDINATION**

# Recommendation: Recovery Resource Coordination

Increase emphasis on recovery and resource partnerships, pre-event.

Establish dedicated, regional recovery resource program.

# **Recommendation: Recovery Resource Management**

**Close communication gap between resource providers, local coordinators, and recipients to expedite distribution of goods.**

- 1. Private-Sector Recovery and Virtual Business Emergency Operations Center (VBEOC)**
- 2. Public Recovery Resource Access Portal**

# Virtual Business Emergency Operations Center (VBEOC)

- **One-stop platform connects to situational links: weather (NOAA), traffic/detours (DoT), etc.**
- **Access any geography for real-time awareness.**
- **Local EOC sitreps accessible to resource providers anywhere.**
- **Collaboration real-time: EOC to businesses, businesses to each other.**

# Public Recovery Resource Access Portal

**Tells public where to get and  
donate resources**

**Incident initiated**

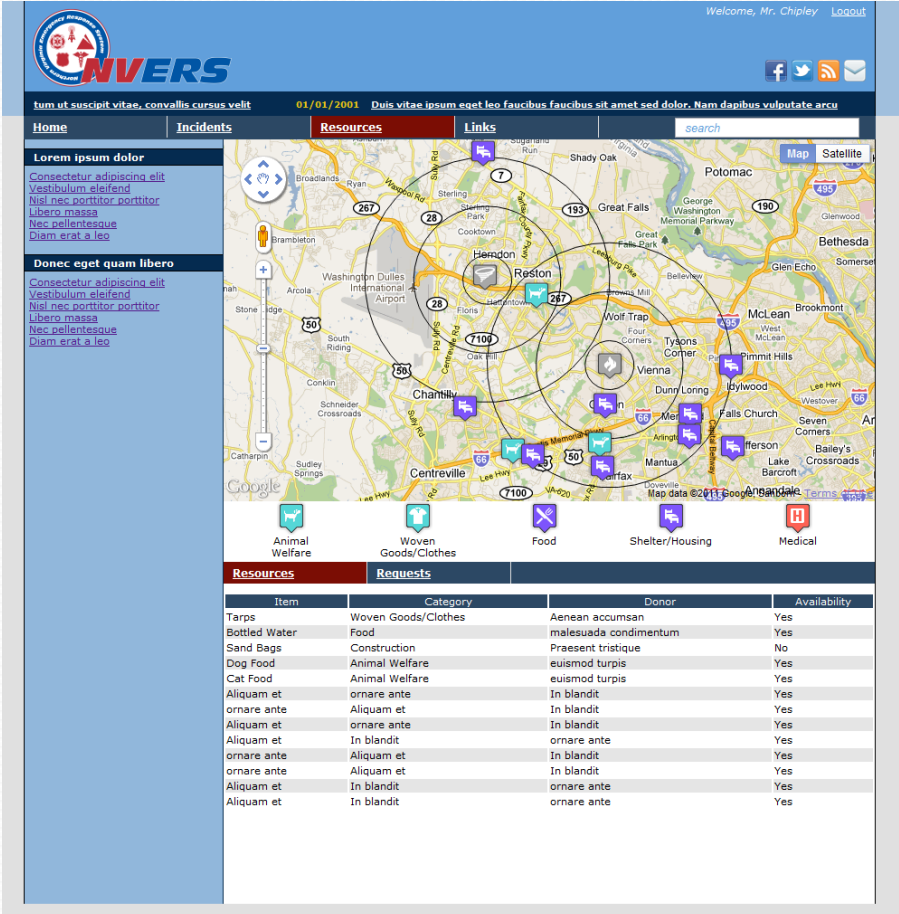
**Transferrable to any  
jurisdiction**

# Public Recovery Resource Access Portal

[www.Recovery4NoVA.org](http://www.Recovery4NoVA.org)

Pre-determined resource sites:

- Food
- Medical
- Shelter
- Woven Goods
- Animal Care



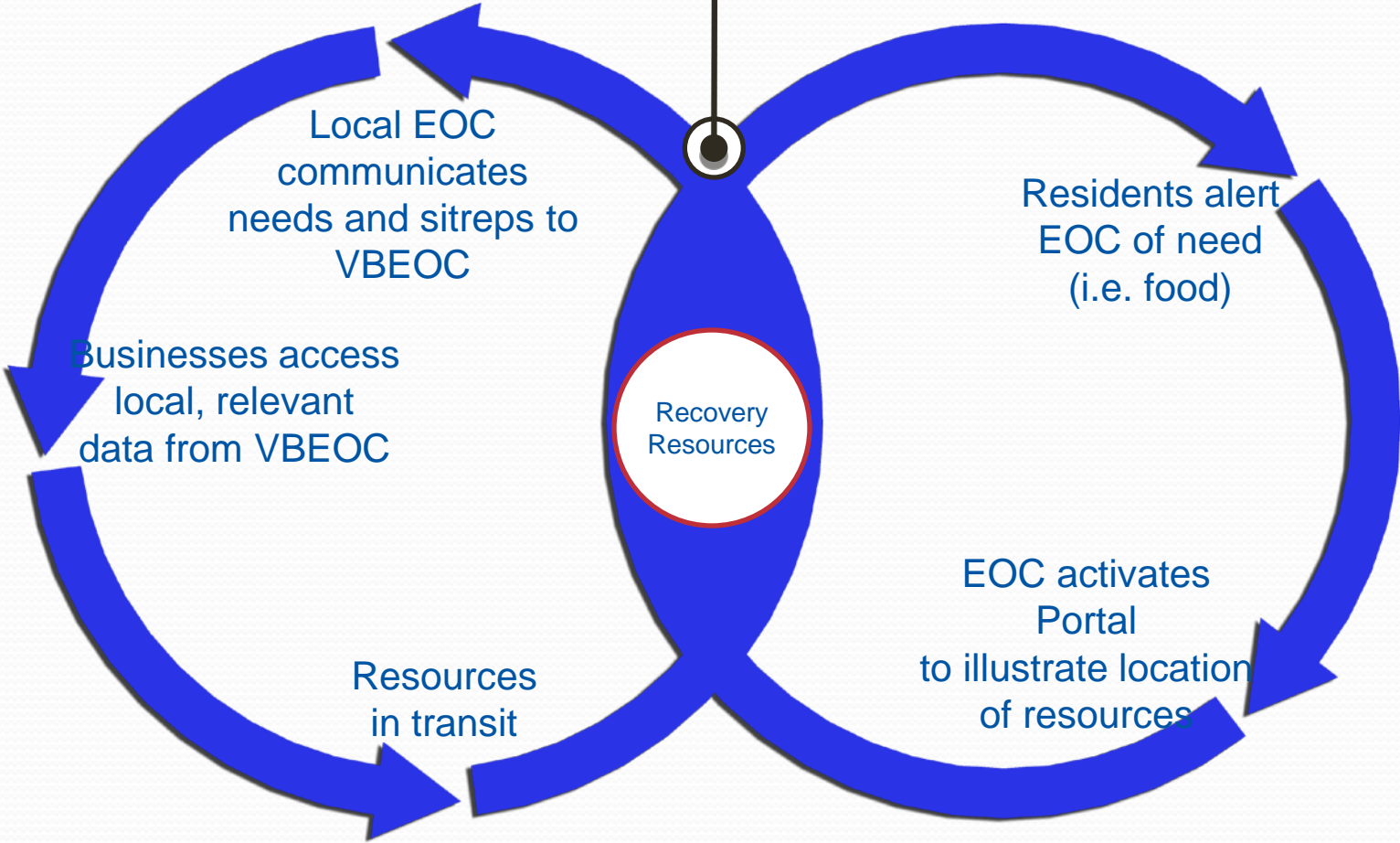
The screenshot displays the NVERS website interface. At the top, there is a navigation menu with 'Home', 'Incidents', 'Resources', and 'Links'. A search bar is located on the right. Below the navigation, a map of the Washington DC area is shown with various resource icons (Animal Welfare, Woven Goods/Clothes, Food, Shelter/Housing, Medical) overlaid. A table titled 'Resources' is visible at the bottom, listing items, categories, donors, and availability.

Item	Category	Donor	Availability
Tarps	Woven Goods/Clothes	Aenean accumsan	Yes
Bottled Water	Food	malesuada condimentum	Yes
Sand Bags	Construction	Praesent tristique	No
Dog Food	Animal Welfare	eiusmod turpis	Yes
Cat Food	Animal Welfare	eiusmod turpis	Yes
Aliquam et ornare ante	Aliquam et	In blandit	Yes
Aliquam et ornare ante	Aliquam et	In blandit	Yes
Aliquam et ornare ante	In blandit	ornare ante	Yes
Aliquam et ornare ante	Aliquam et	In blandit	Yes
Aliquam et ornare ante	Aliquam et	In blandit	Yes
Aliquam et	In blandit	ornare ante	Yes
Aliquam et	In blandit	ornare ante	Yes

Incident occurs  
↓  
Activate EOC

*Supply Chain  
Coordination*

*Public Resource  
Access*



Local EOC communicates needs and sitreps to VBEOC

Businesses access local, relevant data from VBEOC

Resources in transit

Residents alert EOC of need (i.e. food)

EOC activates Portal to illustrate location of resources

Recovery Resources

## **Contact information:**

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