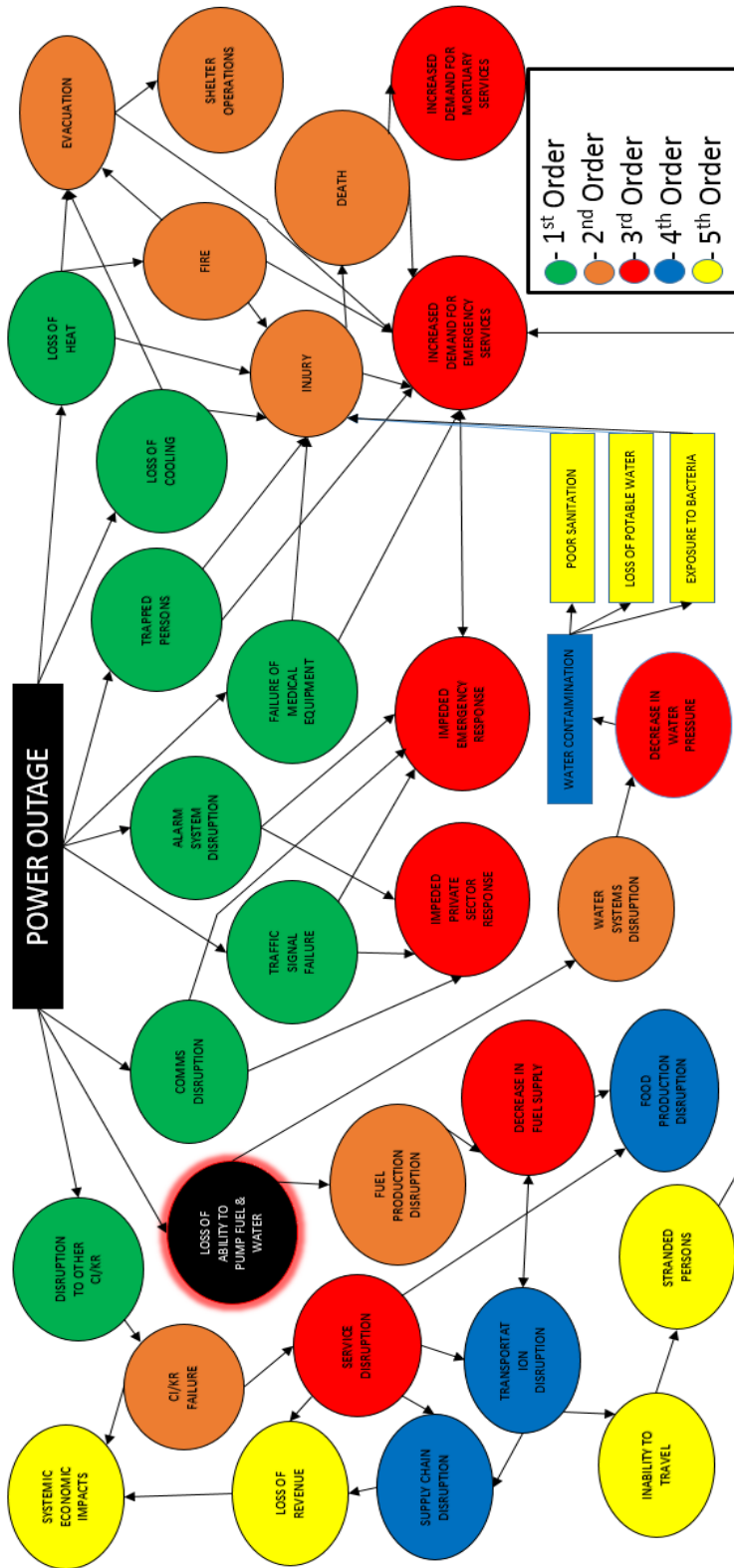


ANNEX 1 TO APPENDIX 15

(IMPACTS TO SOUTH CAROLINA CRITICAL LIFELINE SECTORS)
TO THE SOUTH CAROLINA EMERGENCY OPERATIONS PLAN

GENERAL RISK ANALYSIS (SPACE)

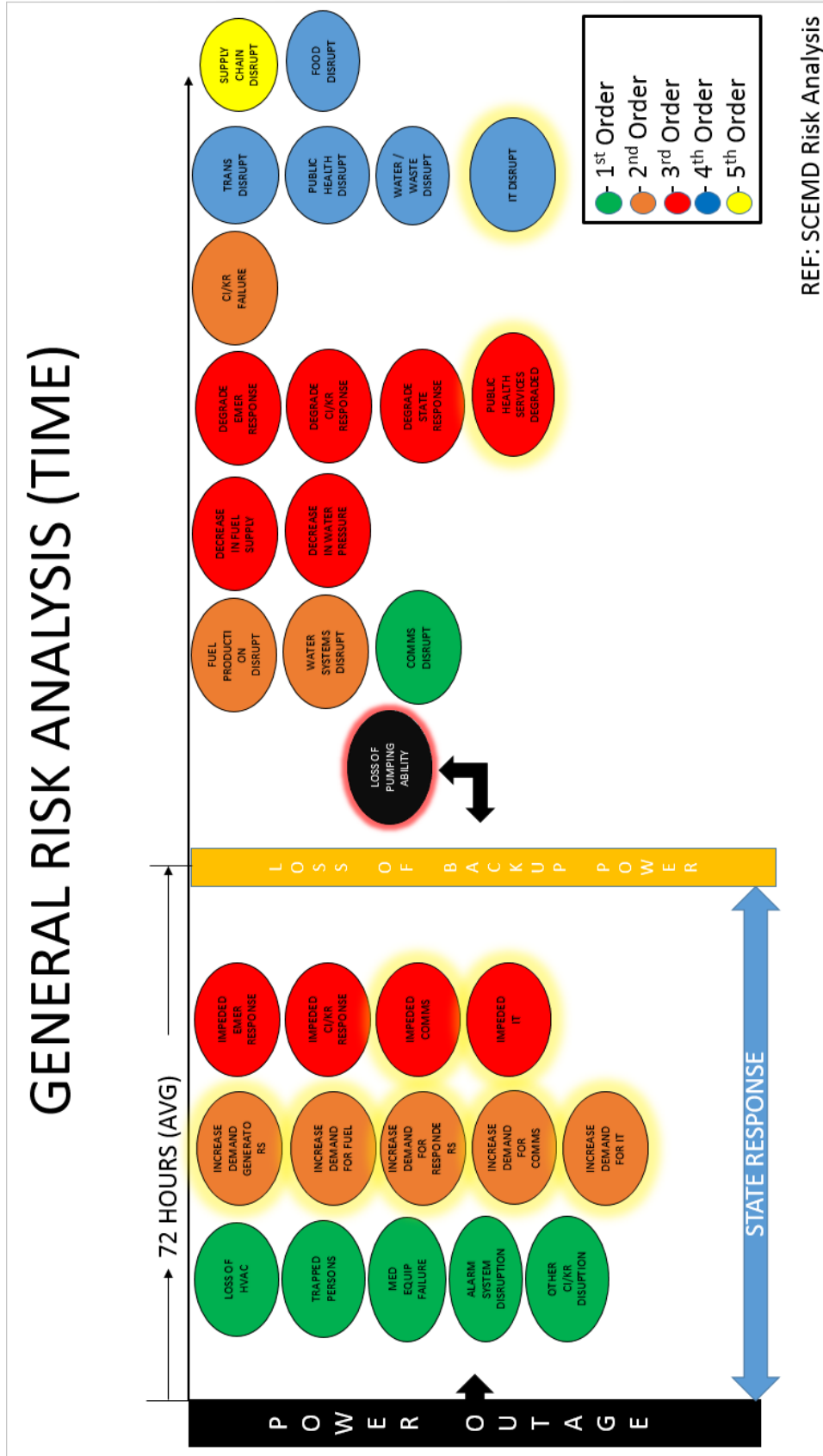


REF: FEMA Risk Knowledge Database

1. General State-Wide Risk Analysis

This link diagram represents anticipated first through fifth order effects from a LTPO.

NOTE: Loss of Ability to pump fuel and water is a key threshold that when reached, accelerates follow-on effects.



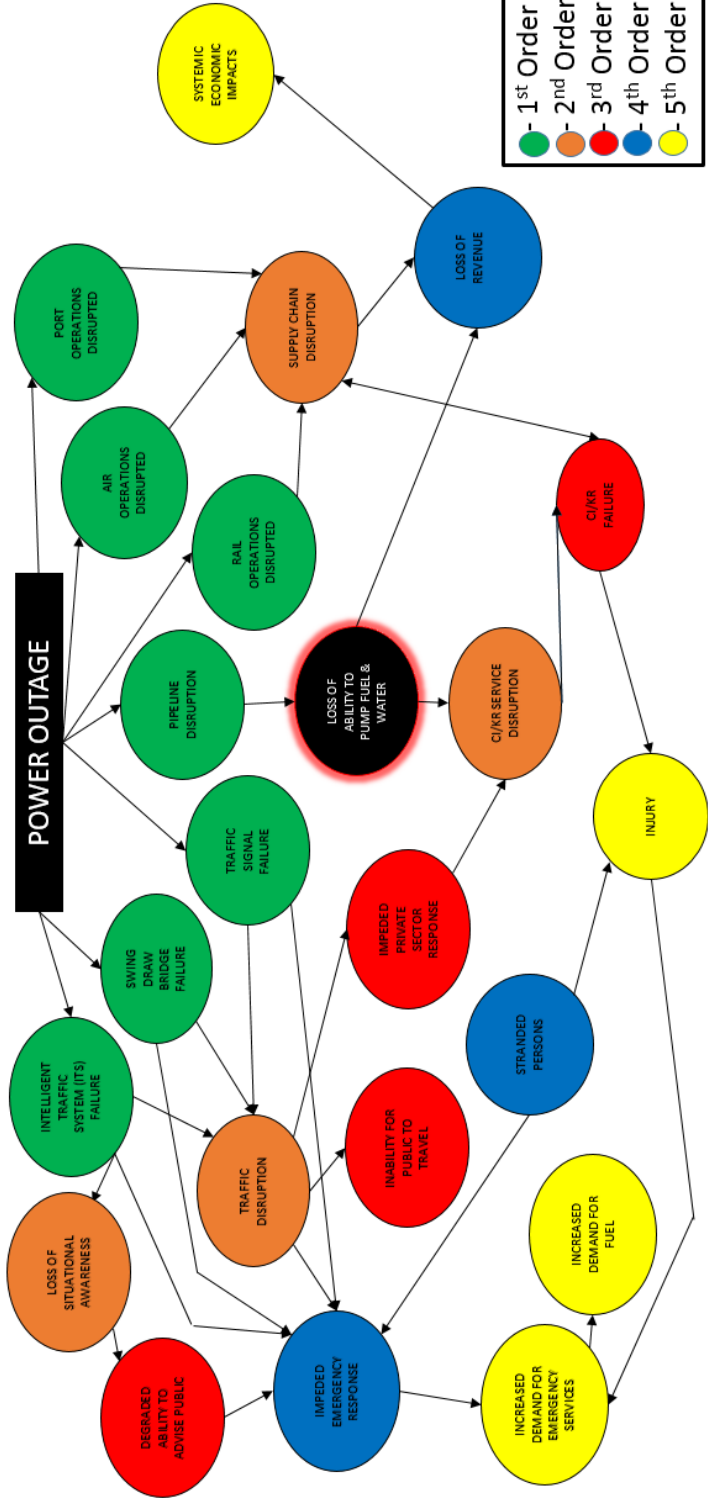
In this diagram, time is applied to the effects identified in the link analysis.

NOTE: It is anticipated there is enough fuel to provide generator support for 72 hours. Once that threshold is reached, the ability to pump fuel/water is lost.

Events with halos represent follow on effects the link analysis did not identify.

2. Transportation Risk Analysis

TRANSPORTATION RISK ANALYSIS (SPACE)

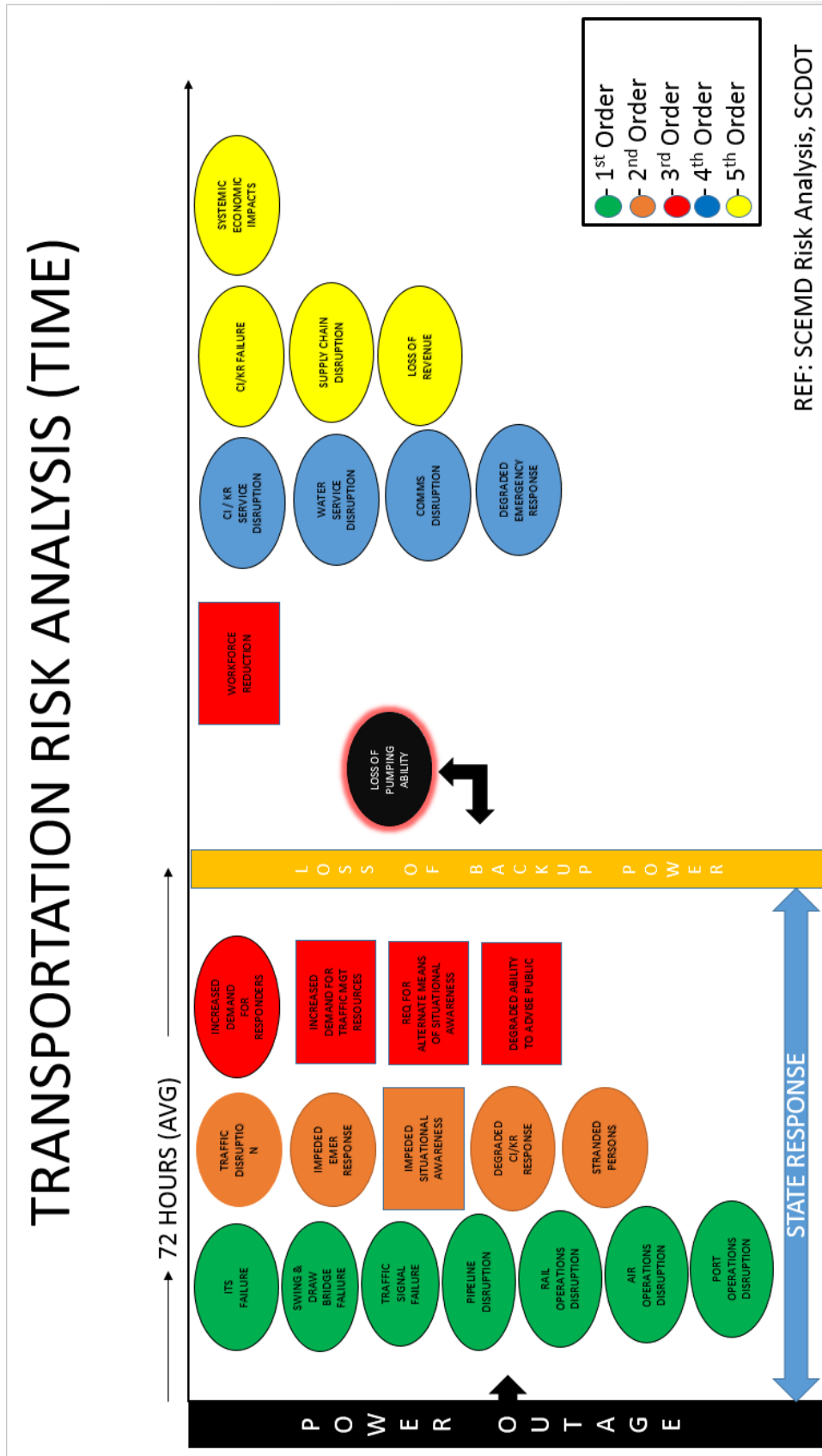


1st Order	2nd Order	3rd Order	4th Order	5th Order
(Green Circle)	(Orange Circle)	(Red Circle)	(Blue Circle)	(Yellow Circle)

REF: SCEMD Risk Analysis, SCDOT

Initial transportation impacts fall into three primary categories:

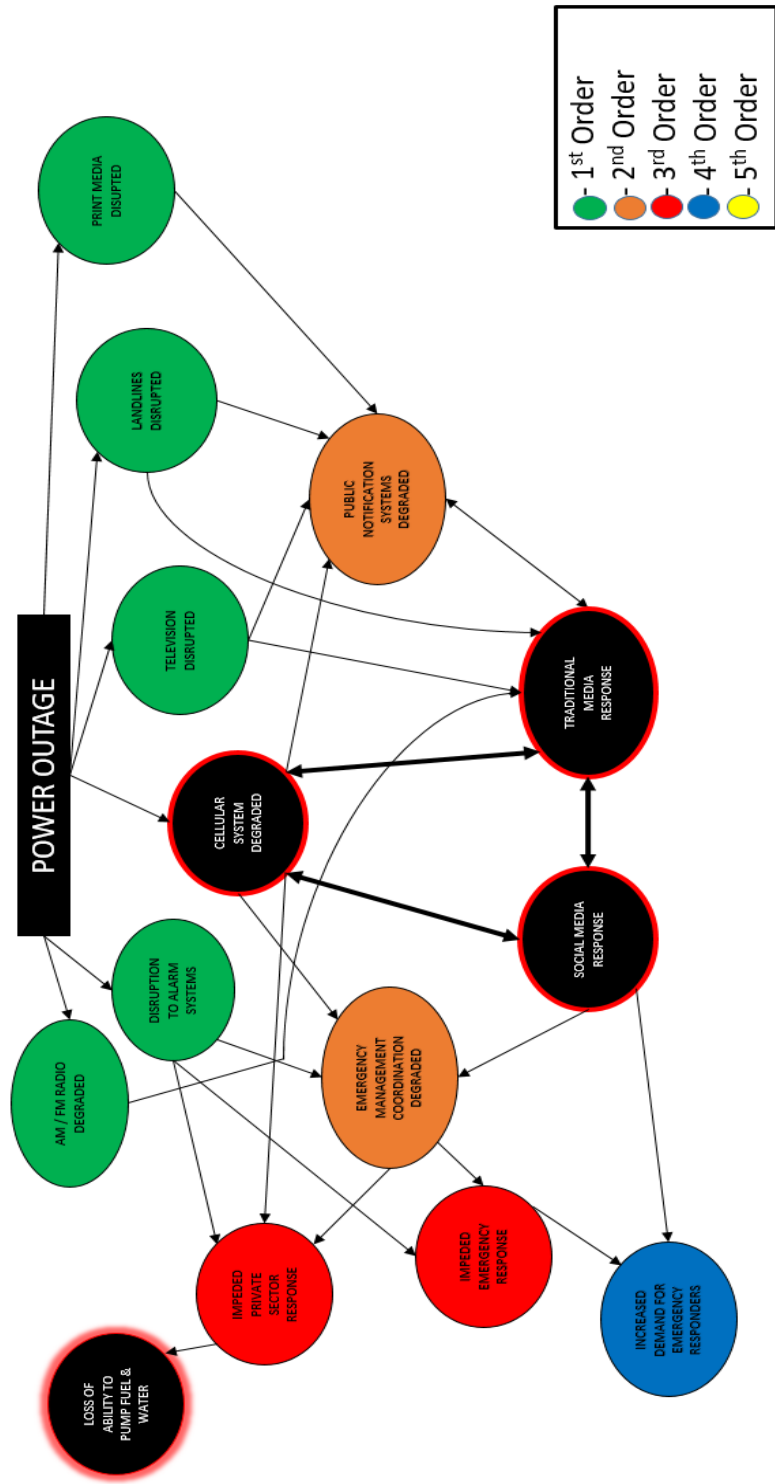
- Traffic disruption (loss of situational awareness due to ITS failure)
- Supply chain disruption
- CI/KR disruption resulting from inability of industry to receive commodities.



Applying time to 1st order transportation impacts identifies additional affects not immediately apparent in the link analysis. Additional impacts are identified by square shapes and link to loss of situational awareness. This loss requires alternate means to obtain situational awareness and impacts the ability to advise the public and direct traffic management resources.

3. Communications Risk Analysis

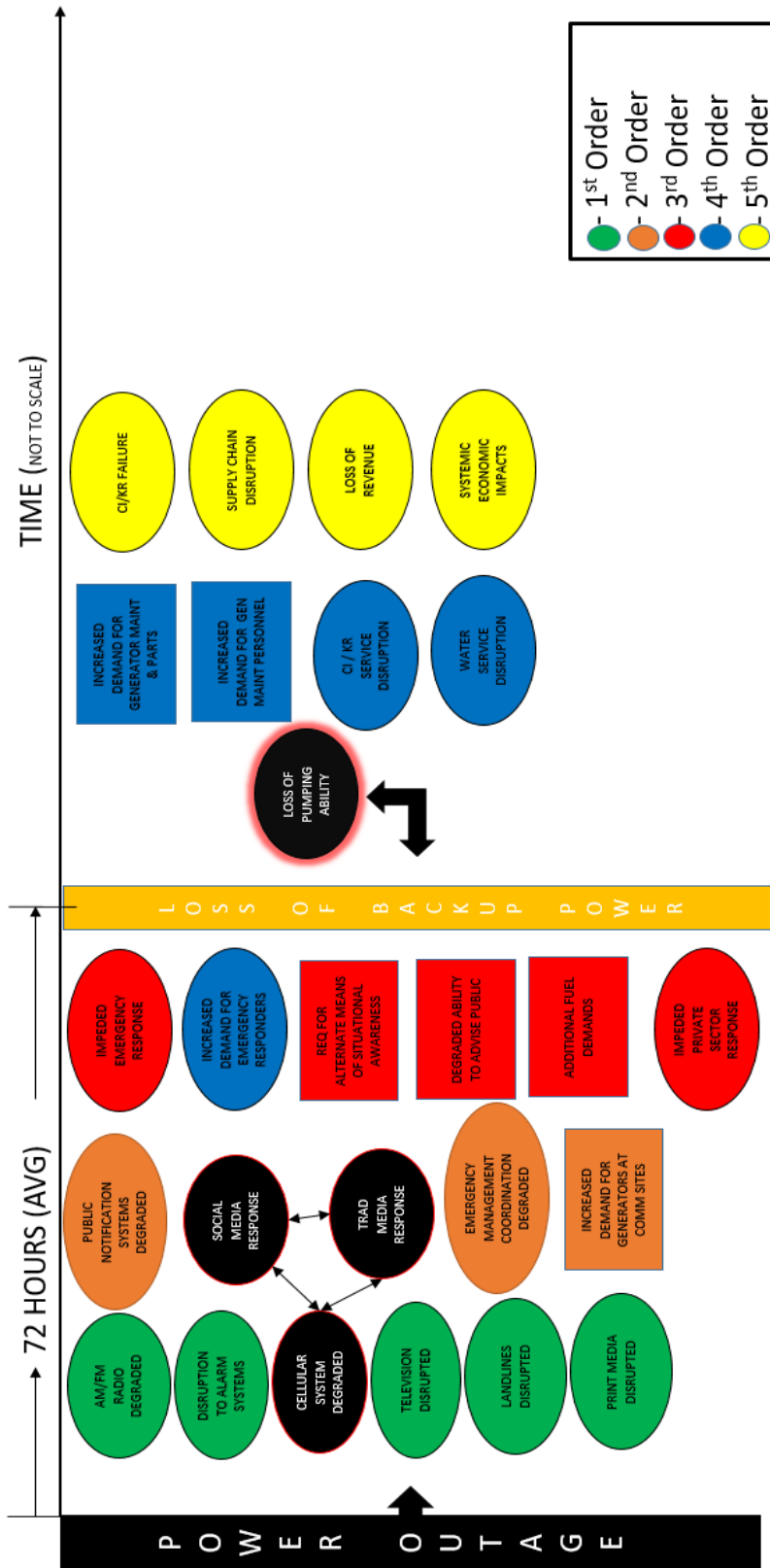
COMMUNICATION RISK ANALYSIS (SPACE)



REF: FEMA Risk Knowledge Data Base / SCEMD

All public information mediums will be affected. Degraded cellular capacity and reliance by the public (represented here by social media) and traditional media will accelerate loss of communication; additional use will consume stored battery power.

COMMUNICATION RISK ANALYSIS (TIME)

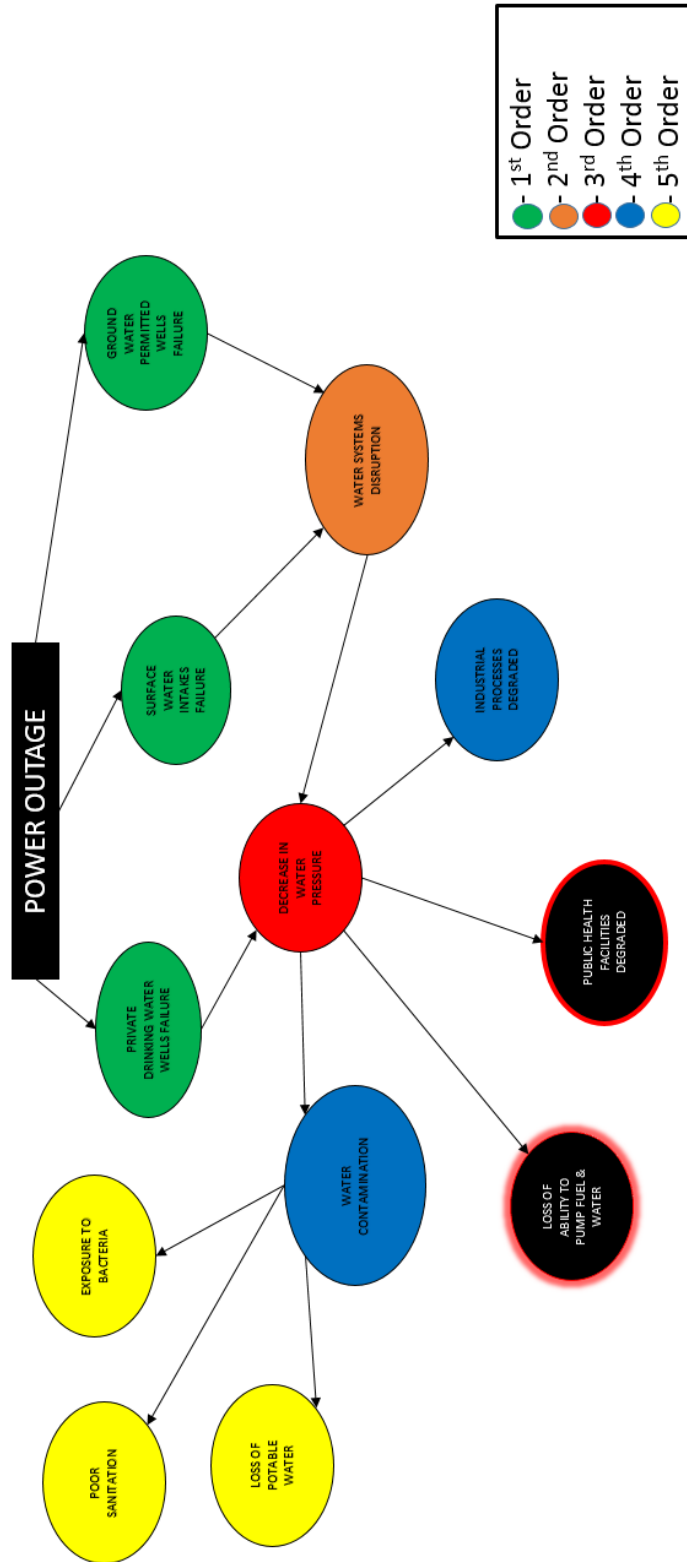


REF: SCEMD Risk Analysis

Most public safety communication systems have back-up power; analysis indicates first responders will be able to communicate. Impacts due to emergency manager reliance on cellular systems, loss of situational awareness from human sources, and ability of government to inform the public are expected; FM is potential medium for provision of information once cellular battery supplies are depleted.

4. Water / Wastewater Risk Analysis

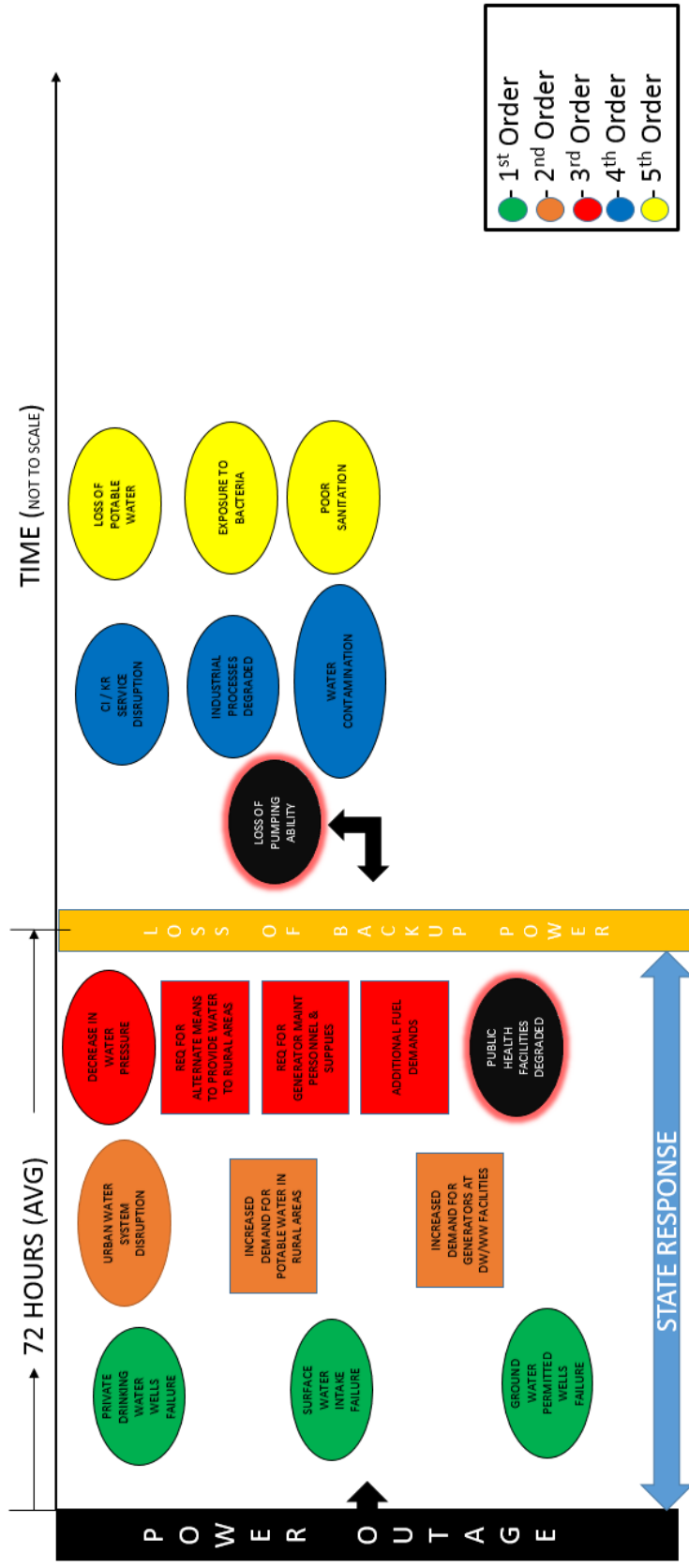
WATER/WASTEWATER RISK ANALYSIS (SPACE)



REF: FEMA Risk Knowledge Database / SCEMD/ SCWARN / SCDHEC

Assessment indicates most urban/suburban water systems have back-up power to pump water and waste for 72 hours; rural residents reliant on power to draw water from private wells will feel immediate effects. Fuel constraints will pose challenges in communicating conservation of water practices and delivery of potable water to impacted citizens in rural communities.

WATER/WASTEWATER RISK ANALYSIS (TIME)

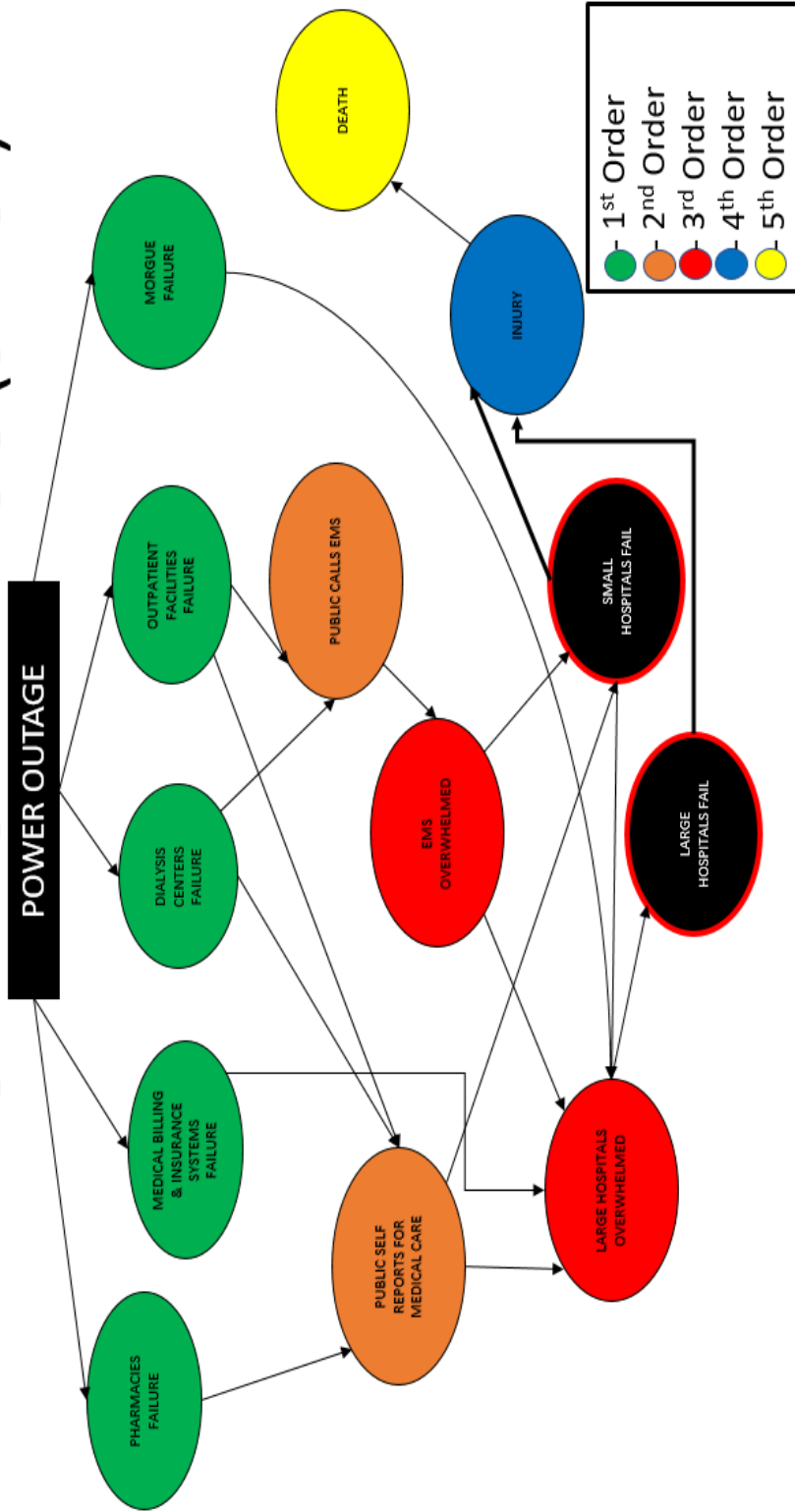


REF: SCEMD Risk Analysis / SCWARN / SCDHEC

The timeline graphic illustrates public health facility dependency on potable water and water for HVAC systems.

5. Healthcare Risk Analysis

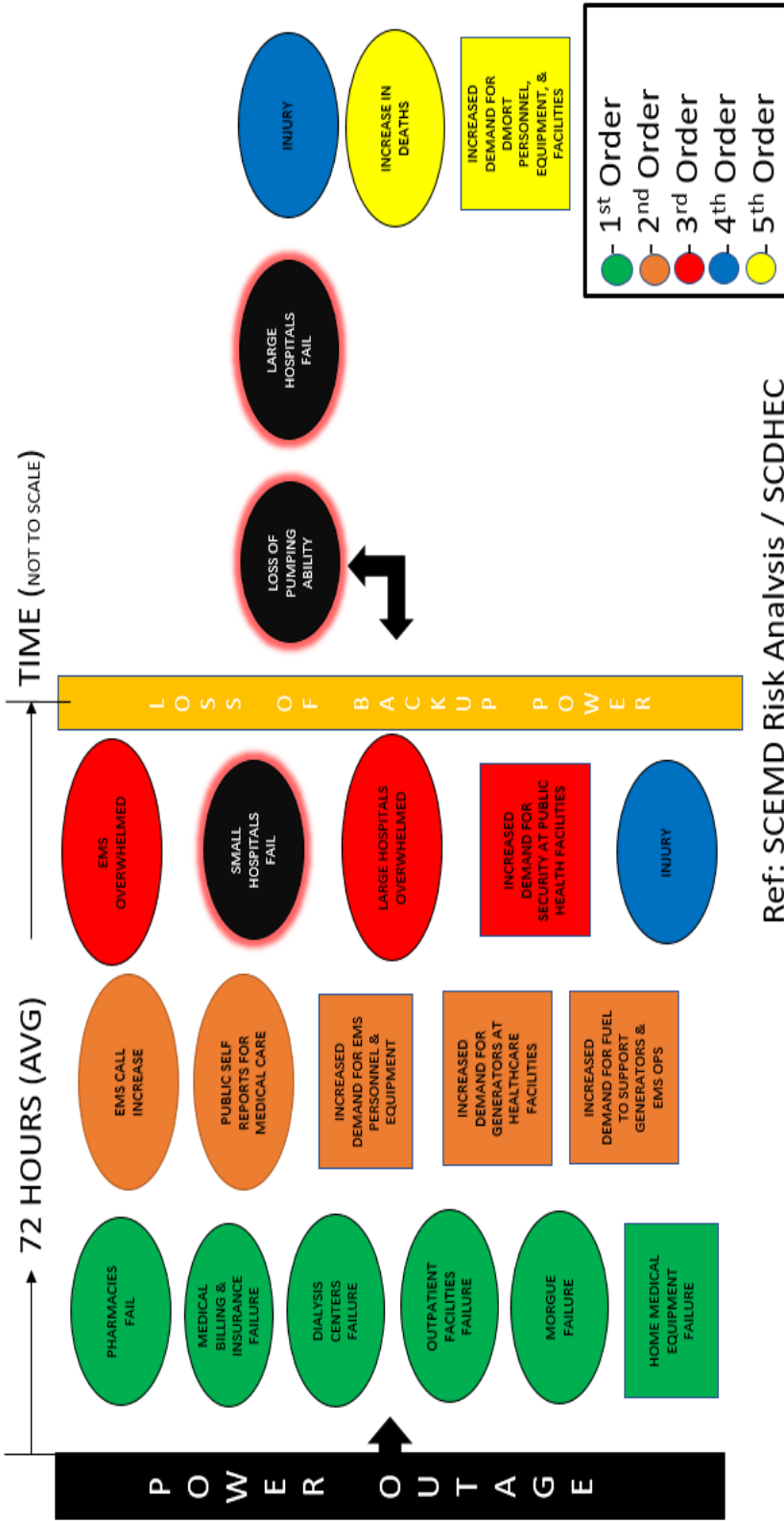
HEALTHCARE RISK ANALYSIS (SPACE)



Ref: FEMA Risk Knowledge Database / SCEMD / SCDHEC

Anticipated failure of healthcare facilities will stress those with back-up power and the ability to continue service delivery.

HEALTHCARE RISK ANALYSIS (TIME)

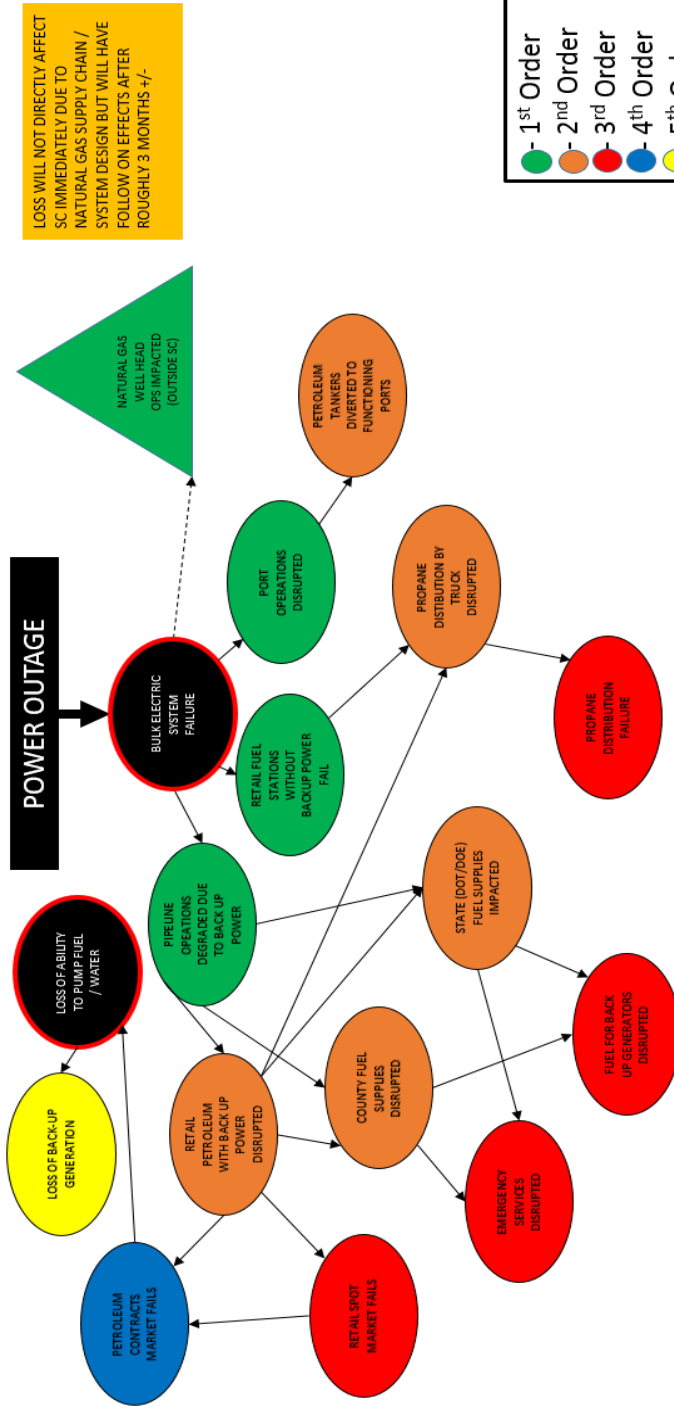


Ref: SCEMD Risk Analysis / SCDHEC

Additional loss of home medical equipment will increase burden on EMS and hospitals. Cascading effects include increased demand for EMS, generators, and fuel and maintenance for generators.

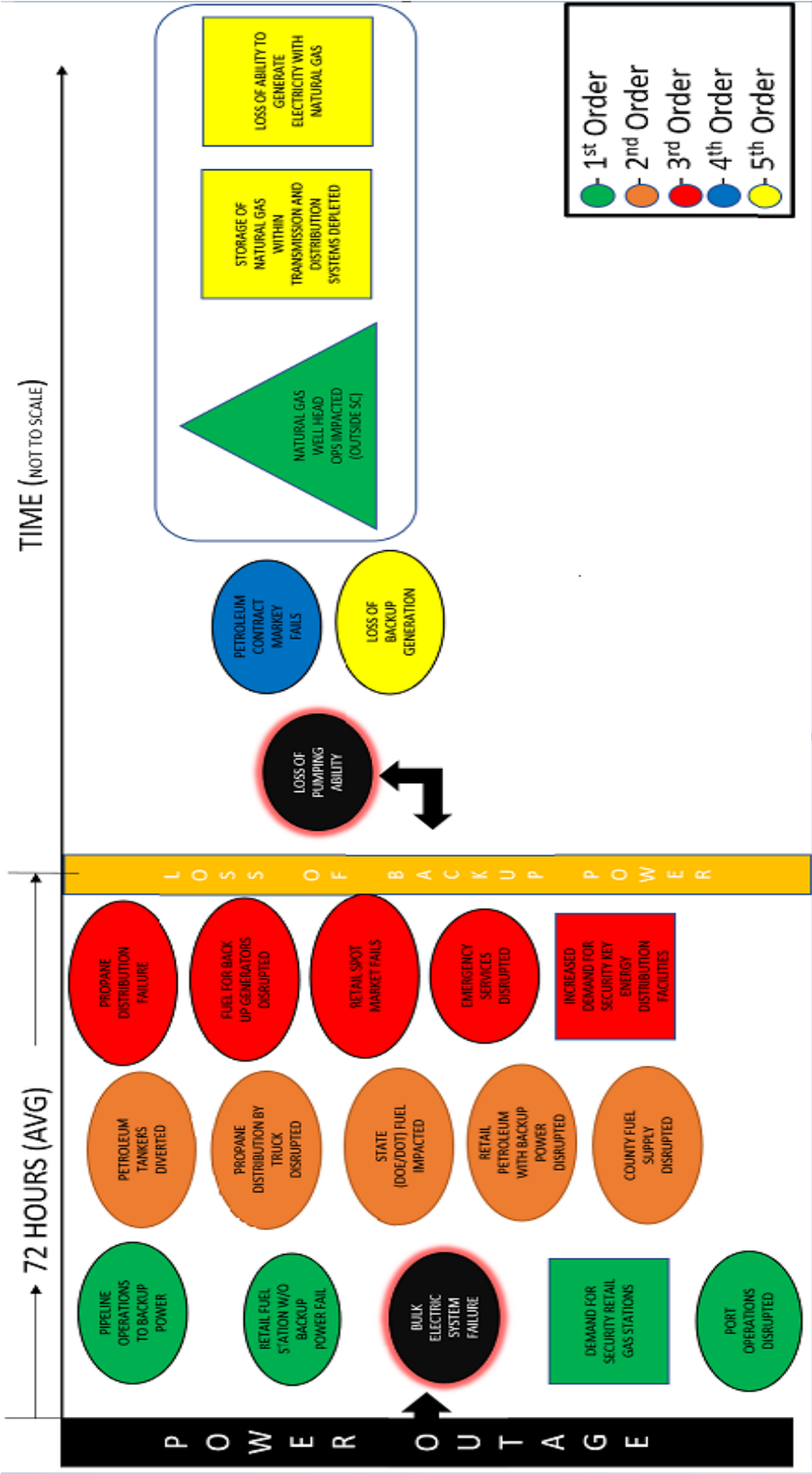
6. Energy Risk Analysis

ENERGY RISK ANALYSIS (SPACE)



REF: FEMA Risk Knowledge Database / SCEMD / SCORS

Cascading effects on energy sector evolve from failure of the BES and loss of petroleum. Loss of electric power will affect the pipeline providing 75% of SC's fuel supply and Port of Charleston providing remaining 25%. Immediate impacts will be felt by retail fuel stations without back-up power.



Pipelines depend on BES to deliver petroleum products and natural gas. Residual product may exist within the pipeline for several days or weeks of supply. As time goes by, supplies will diminish. Security concerns at retail fuel stations will be immediate, and the need for security at other pipeline infrastructure will increase as time passes.

** The triangle designates events outside the state.