# ISC FEMA Community Lifelines

Our communities are complex and comprised of intricate relationships and interdependencies between the built and social environments and the functions they provide. When disaster strikes, the impacts to the community have a cascading effect and disrupt government and business functions that are essential to human health, safety, and economic security.

To help streamline the complexities of a community, FEMA created the concept of Community Lifelines to help communities and emergency management professionals understand and communicate incident impacts using plain language.









Food, Water, and Shelter







# **ABOUT US**

Integrated Solutions Consulting is a professional services firm focused on developing and implementing comprehensive crisis and consequence management solutions. We are a team of innovative problem-solvers that combine experience and evidence-based knowledge to deliver practical, best practice results across multiple industries to make communities safer and more resilient.



## **Growing Complexities of Communities & Lifelines**

Over the past century, many communities have made significant investments in creating a vast network of critical infrastructure and essential resources that provide numerous benefits and function as central services to modern day activities. This investment continues today, resulting in an increasingly complex and interdependent network of critical infrastructure and key resources that grow to be more ubiquitous, accessible, reliable, and transparent as they mature.

As development expands and technologies advance, infrastructures become:

- Regionally, nationally, and globally interconnected.
- Increasingly complex and interdependent.
- Progressively critical to a modern functioning society.









#### ISC's EXPERTISE IN COMMUNITY LIFELINES

For almost two decades, ISC and our team of experts has championed research and development devoted to understanding the interconnectedness of vital community lifelines, their cascading impacts after a disaster, and developing strategies for building resilient infrastructure and communities. From developing sophisticated methodological tools to evaluating over 4,500 indicators and measurements of community lifeline vulnerabilities to evidence-based methods assessing the interdependencies and cascading impacts of vital community infrastructure assets and key resources, ISC has served as an industry leader in Community Lifelines.

Our team of experts have developed methods that allow our clients to adhere to the programmatic directives provided by FEMA while still delivering community-specific results that thoroughly investigate the vulnerability of a community's vital lifelines, develop meaningful strategies to integrate this into a comprehensive emergency management program, and design a roadmap for building a resilient tomorrow.

#### Community Lifeline Vulnerability, Risk & Resiliency Model

Our leading experts have been focused on developing Community Lifelines innovations and solutions for almost two decades. The Community Lifeline Vulnerability, Risk & Resiliency (CVR2) Model serves as a dynamic planning tool that utilizes proven hazard analysis strategies and processes to build partner consensus, ensure uniformity, and provide results that are operationally significant. CVR2 operates by utilizing a number of input parameters consisting of hazard profiles, economic, social, physical community



vulnerabilities, other special community concerns. These inputs are assessed and evaluated to determine the risk to the community from a specific or multiple hazard threat(s). The output of the CVR2 Model is a prioritized indication of planning risk considerations that can be incorporated into the community's comprehensive preparedness efforts, providing a foundation that will increase programmatic efficiency, operational effectiveness, and a unified common operational picture. The CVR2 Model is a culmination of over 100 years of knowledge and incorporates over a decade of research of hazard risk assessment methodologies by several of the nation's premier disaster researchers.

## South Florida Community Lifelines Consequence & Impact Analysis

ISC developed a regional comprehensive consequence and impact analysis of South Florida's vital Community Lifelines. To complement the detailed THIRA, ISC developed a comprehensive strategy to evaluate the consequence and cascading impact of vital community lifelines from all of South Florida's threats, including natural disaster, terrorism, man-made hazards and infrastructure failure. The purpose of this project was to:

1) provide an initial baseline inventory of community lifeline systems and assets, 2) assess associated vulnerabilities and criticality throughout the South Florida Region, 2) develop a comprehensive and all-hazard methodology to evaluate the criticality, vulnerability, and cascading impacts of community lifelines and critical infrastructure assets, 3) evaluate current data assets, identify areas of proficiency and improvement, and 4) establish a regional strategy to maintain and update community lifeline data repositories.

