Nevada's Approach to Critical Infrastructure Protection



Presented by: Ernest Chambers Jr.

"All Eyes for All Hazards"

Infrastructure Protection Relies Heavily upon ESRI/GIS related Technologies & Capabilities

PERSPECTIVE

"See It, Seize It!"
(Opportunity/Position of Advantage/Early Warning)
Pre-Emptive Action

Overview

- Intelligence Led Perspective
- Critical Infrastructure Protection Program "Silver Shield"
- Protecting Critical Infrastructure Information (PCII Program)
- Fusion Center Integration
- Demo of Capabilities & GIS Integration

Intelligence Led Perspective

- Originating in the UK, ILP (Brought Intel & Analysis to the forefront of Police Operations)
- Kent Constabulary-in response to sharp increases in property-related offenses (e.g., burglary and automobile theft) at a time when police budgets were being cut
- Focus is on "Leading Indicators" (Proactive) Vs. Trailing (Reactive)
- Blended Threat Environment "Evolving & Mutating"
 - Al Qaeda ideologues Abu Mus'ab al Suri advocate for "individual jihad" (1604-page book Da'wat al-Mogawma)
 - Active Shooter (New York NY Hotel)
 - Barricaded Suspected/Hostage Takers
 - Suicide Bomber

GIS Facilitates "ILP"

- Intelligence Preparation of the Battlespace (IPB)

Battlespace Starts at Your Door-Step (Shopping Malls, Casino Gaming, Schools & the Workplace-"Frontline" Soft Targets)

GIS: Provides for Intel Led Solutions that assist Public/Private Sector organizations to achieve Strategic, Tactical & Operational Advantage

Picture/1000 Words!

Silver Shield's Mission

"Identify, catalogue, prioritize and coordinate for the protection of critical infrastructure / key resources (CI/KR) to support Federal, State, Local & Tribal readiness, prevention, mitigation & response efforts."

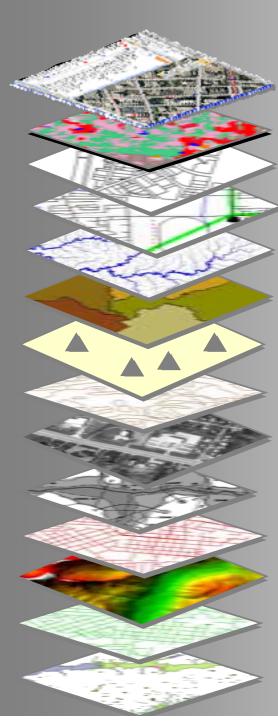
Silver Shield's 5 Program Objectives

- Identify & Catalogue CI/KR
- Deploy Tactical Emergency Response Planning (TERP) Tool IAW NRS 463.790
- Provide "Incident/On-Scene" Commanders Online Access TERP
- Implement an Infrastructure Liaison Officer (ILO) program
- Deploy an Outreach Program-"Fear Reduction & Enhance Preparedness"

"ALL EYES FOR ALL HAZARDS & CRIMES"

Defining Critical Infrastructure - Critical Infrastructure/Key Resources & LOIs

- Public or private sector assets that by virtue of their function, design and/or interdependencies, if destroyed or rendered inoperable would cause the entire or significant collapse of one or several facets of the Local, State, Regional or National economy; cause mass casualties or damage the public morale/confidence to such a degree as to adversely impact the security, public health, well being & safety of the citizenry.
- Tier I/II criteria established by DHS



Government

Agriculture

Transportation

Banking and Finance

Water

Defense Industry

Chemical Industry

Services

Energy

Public Health

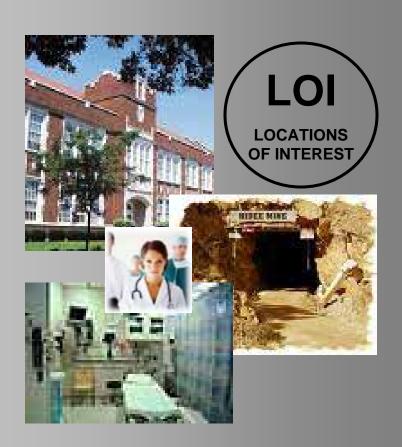
Information and Telco

Food

Postal and Shipping

Emergency Services

17 Critical Infrastructure Sectors Identified by DHS



Silver Shield "Buckets"



Protected Critical Infrastructure Information (PCII) -

In accordance with the provisions of 6 C.F.R. Part 29, PCII information is exempt from release under the Freedom of Information Act (5 U.S.C. 552) and similar State and local disclosure laws. Unauthorized release results in criminal and administrative penalties. It is to be safeguarded and disseminated in accordance with the Critical Infrastructure Information Act of 2002, 6 U.S.C. §§ 131 et seq., the implementing Regulation at 6 C.F.R. Part 29 and PCII Program requirements.

PROTECTED CRITICAL INFRASTRUCTURE INFORMATION Requirements for Use

Nondisclosure

This document contains PCD. In accordance with the promisions of 0 C F R. Part 19, in its exempt from release under the Freedom of Information Act (S.U.E.C. 193) and similar from and local disclosure lates. Unauthorized release may easily in criminal and administrative penalties. It is to be suffigurated and disseminant in accordance with the Critical Infrantonizate Infrantonizate Act of 2002, 6 U.S.C. §§ 134-et seq , the implementing Regulation at 6 C.F.R. Part 19 and PCII Program requirements.

By reviewing this cover sheet and accepting the attached PCII you are agreeing not to disclose it to other individuals without following the access requirements and to abide by the guidance contained herein. Your acceptance provides immediate access only to the attached PCII.

hadrodada digible to access the attached PCE must be Federal. Done be botal government employees or contraction and must move

- Assigned to hospiland recurity during related to this critical inflammentary, and

The recipient must obegin with the requirements stated in the Critical Infrastructure Information Act of 2002 found at 6 U.S.C. 31 or say, and the implementing Regulation and C.P.R. Part 19

Storage. When not in your presention, store in a source severances such as in a locked dark discovered locked untaken De not been that decreased anothering of

Transmission. You may request PCD by the following means to an eligible inferribal who mean the access engagements listed above in all cases, the recipient mass accept the regard of the Non-Challenger Agreement before being given access to PCD.

Hand Delivery. Authorized individuals may band carry marretal as long as arone to the material is mutualled while in trans-Email: Encoption should be used Noweer, when this is impracted or unusuable you may remark DCII may regular email. channels. If encognize is not available, and PCII as a password protected availables and provide the password under organizations. Bo not read PCII to personal, non-employment related establishment. Whenever the recipient forwards or dissections a PCII via email place that information in an artefunger

Mail 1959 Flort Class mail or commercial equivalent. Place in an opaque enrelope or container, sufficiently sealed to present loafverient opening and to allow enidence of varipeting and then placed in a second emility that has no marking on it to identify the contem at PCH. Environ or container must bear the complete mane and address of the content and address on. Environment it are not one making the inform to come as PCI and may been to bill our below to reun whose. FORMANTEE DO NOT FORWARD, RETURN TO SENDER." Address to the afformational regurnment for insention made

for You are emporated, but not recoved, to use a sense for. When sending via non-sense for, coordinate with the recipient to empirithat the fixed conecide will not be left unatherled or splyeded to unauthorized disclosure on the receiving end.

Deleghous. You are emputaged to use a Decure Deleghous Cont Equipment. One official phones only in excipant documentation. Reproduction. Ensure that a copy of this short is the first page of all reproductions containing PCE. Once copy machine maillancines and material paper paths are threshold for PCE. Denote all tensorally pages immediately.

Destruction: Descript(i.e., short or bost) this document when an longer needed. For laptops or CPCs, dolors file and empty recycle bits.

For may use PCD to create a work product. The product must not reveal any inflormation that

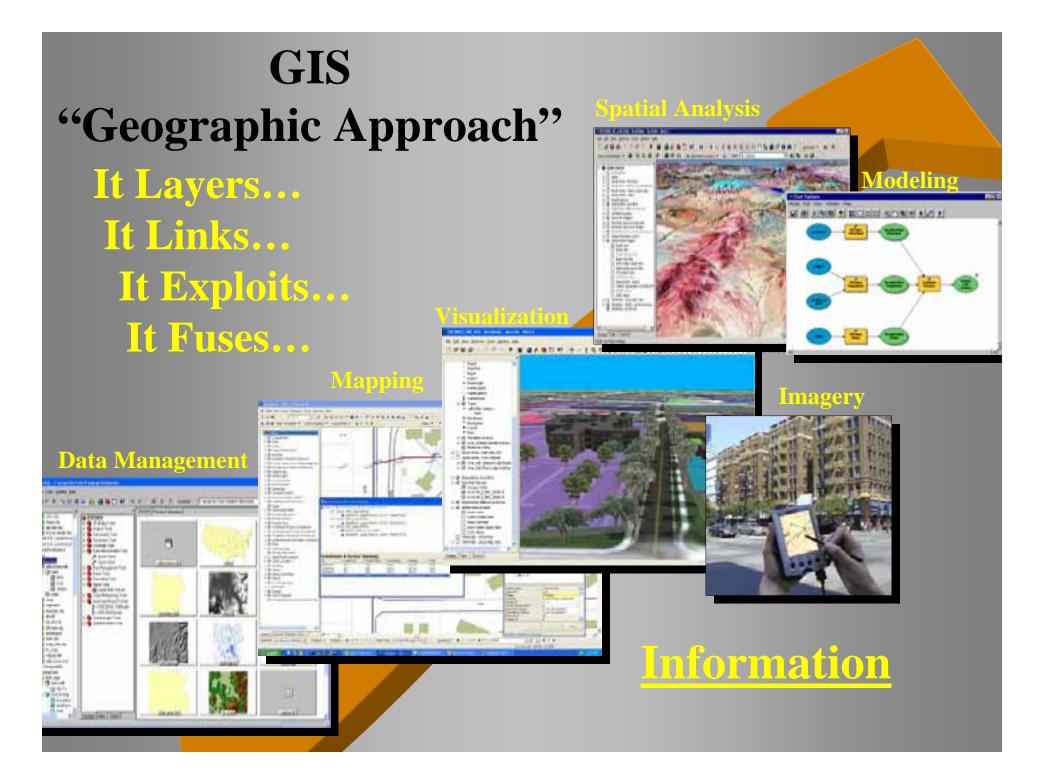
- la proprietary, business separitre, or made secret.
- Relates specifically to, or identifies the submitting person or entry (explicitly or implicitly); and
- · it otherwise our appropriately in the public domain.

Misk any newly meand document containing PCII with "Petracted Critical Infrastructure Inframation" on the mp and better of each page that remains PCII. Mask "(PCII)" beside each paragraph containing PCII. Place a copy of this page over all newly treated documents metaloling PCII. The PCII Tracking Number(s) of the source document(s) must be included on the destructively. created document in the form of an entoine

For more information about derivative products, see the PCII Work Products Guide or speak with your PCII Officer

tacking Humber

PROTECTED CRITICAL INFRASTRUCTURE INFORMATION

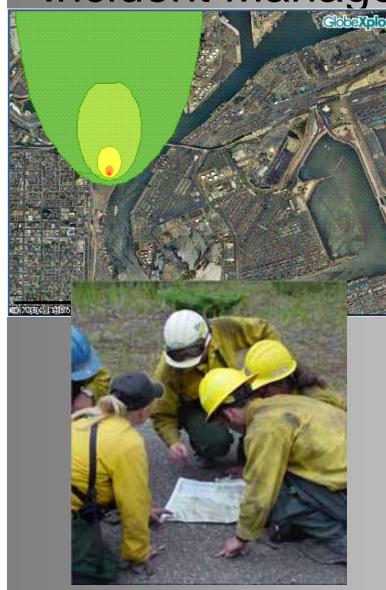


Response

Emergency Response



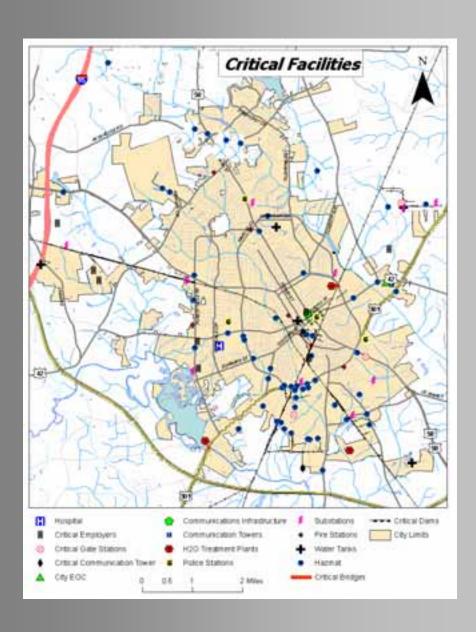
Complex Incident Management





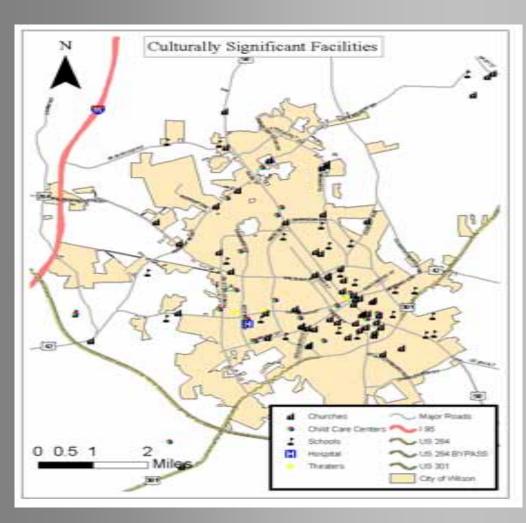


Critical Facility Identification



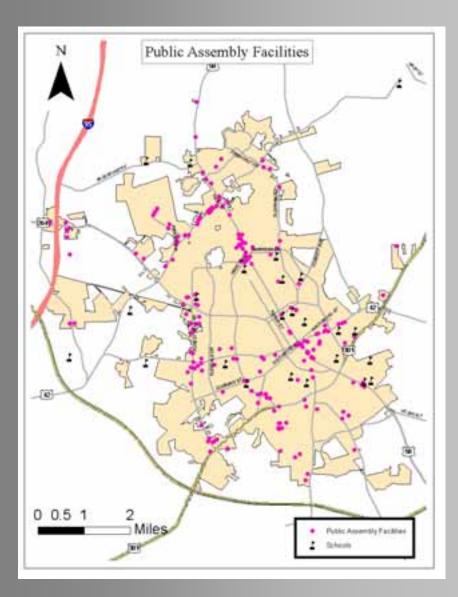
- Cultural Significance
- Public Assembly
- Criticality to City Operations
- Economic Significance
- Technological Hazards

Culturally Significant Facilities



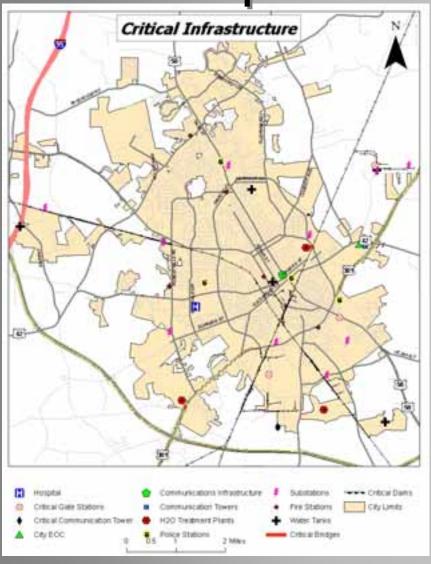
- Churches
- Child Care Centers
- Schools
- Hospitals
- Theaters

Public Assembly Facilities



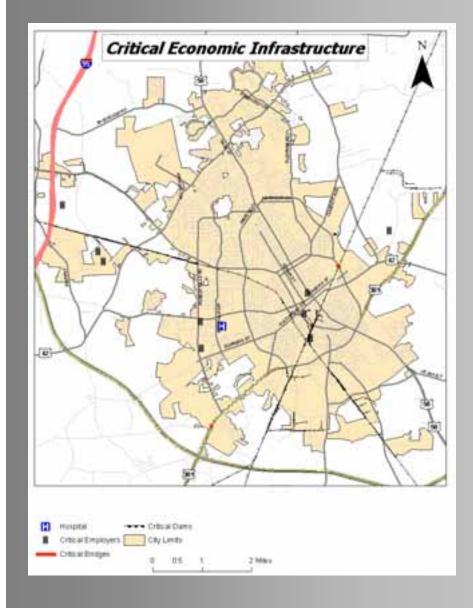
- Churches
- Child Care Centers
- Schools
- Hospitals
- Theaters
- Major Employers
- Recreation Facilities

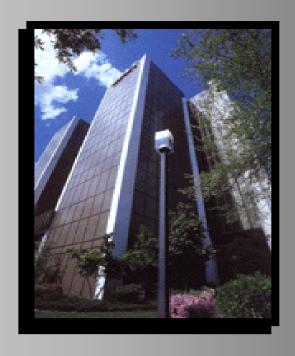
Infrastructure Interdependencies/Essentials



- Power
- Telecommunications
- Water / Sewer Treatment Facilities
- Hospitals

Economically Significant Facilities

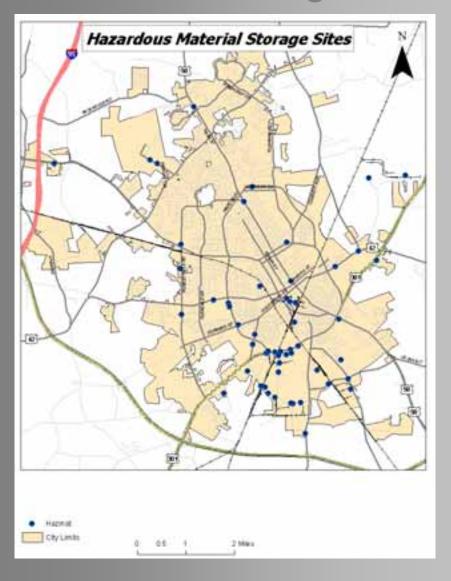




Major Employers

- Financial Centers
- Pharmaceutical Facilities

Technological & Hazardous Facilities

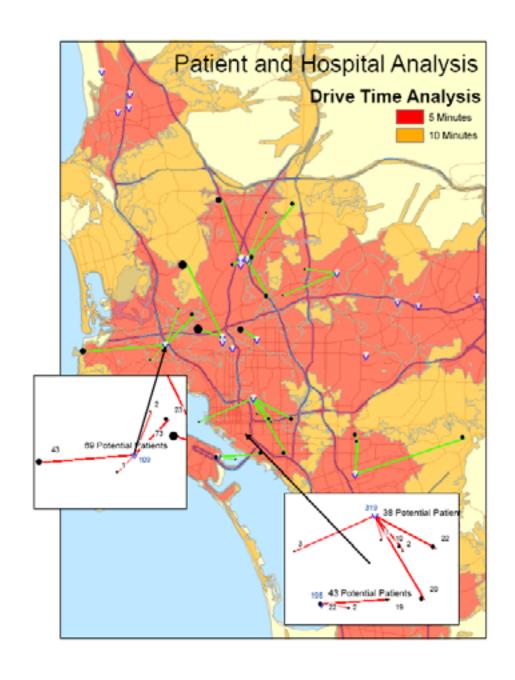


- Pharmaceutical Plants
- Agricultural Chemical Storage Sites
- Pest Control Sites
- Large Box Stores, etc...

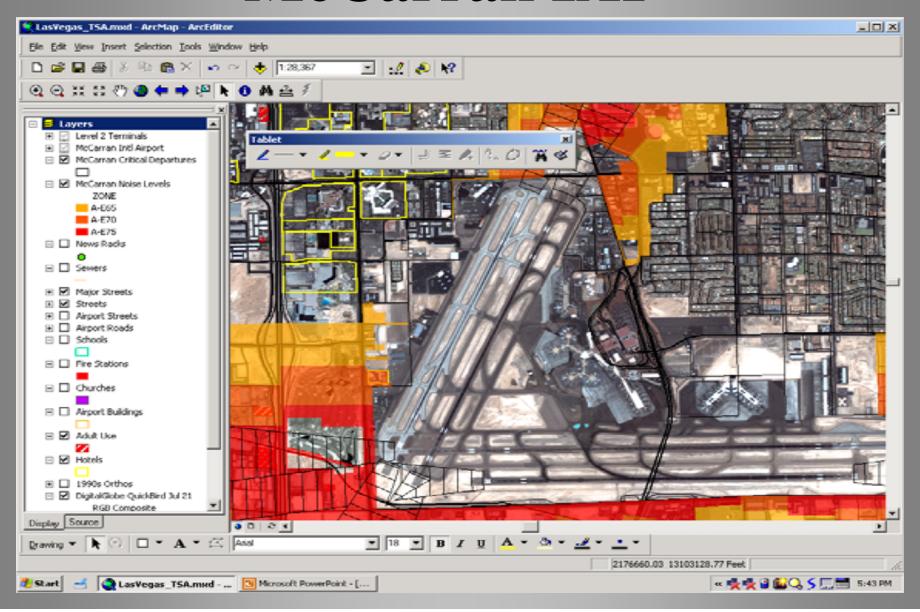


Pandemic Response

Patient, transport analysis



McCarran IAP



Silver Shield'

HIGH-TECH PLATFORM INTERCONNECTIONS

UAV/UAS Unmanned Aerial Vehicle/Systems:



Special Event (New Year's Eve Sites)

Aerial Picture – Used for buffer zone & emergency planning

Resource Management Database



Catalogues the location, condition, owner & availability of critical recovery resources to include operators and other subject matter experts (SMEs)

Tactical Emergency Response Plans (TERPs)

Includes:

- •General Site Characteristics (Periods of Ops)
- Impact Estimates (Plume Modeling, Economic, Psychological, Mass Casualty)
- •Threat Definition (DBTs-Int/Ext, CBRNE, etc.)
- •Key Staff Contacts (24/7 Contacts)
- Site Population Statistics
- •HAZMAT Diary (MSDS, Contamination Est.)
- •Site Security Characterization (PPS, Access Control, Lighting, Surveillance, Route Analysis, Vulnerabilities)
- Quick Reaction/Response Checklists
- Surrounding Infrastructure/Attachments

11/1/2007



TACTICAL EMERGENCY
RESPONSE PLAN

GEO-REFERENCED

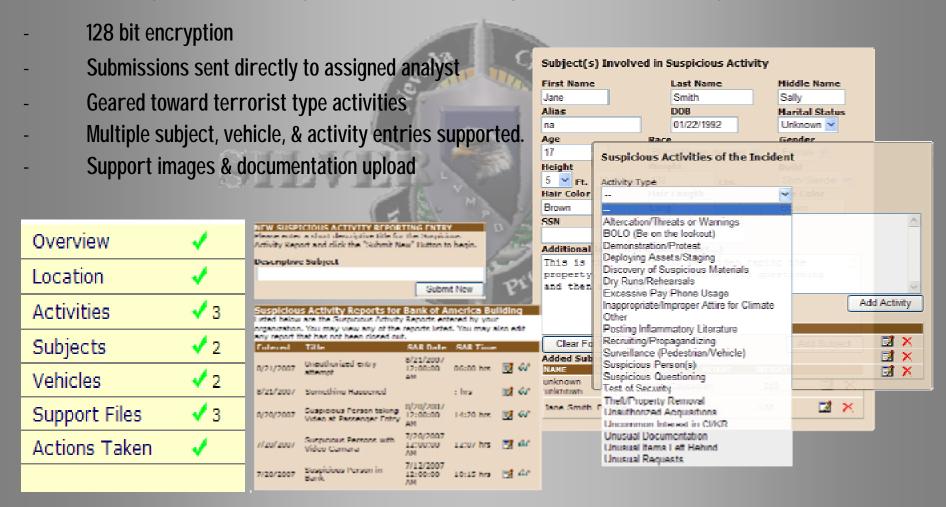
LAW ENFORCEMENT SENSITIVE

Suspicious Activity Reporting-SARS:

PRIVATE SECTOR PARTICIPATION "ALL EYES FOR ALL HAZARDS & CRIMES"

Suspicious Activity Reporting System (SARS)

Encrypted online system for reporting suspicious activity/behavior:

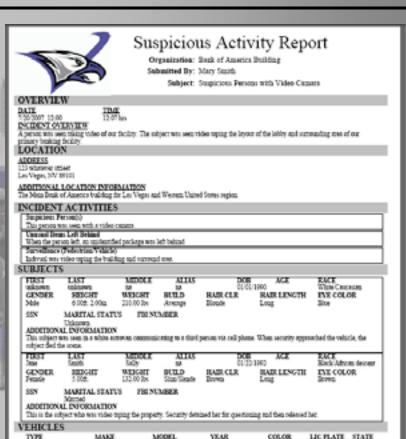


Protected Critical Infrastructure Information (PCII)

LAW ENFORCEMENT SENSITIVE

Suspicious Activity Reporting System (SARS)

Suspicious Activity Reports created in a standardized format to facilitate analysis!



Page 1 of 1

Surgest was seen leaving the seen in this vehicle. Left fendor was damaged and deno

Protected Critical Infrastructure Information (PCII)

ACTION TAKEN

A Fecale object was detained shortly for questioning Report Council 913-2007 9-28-26AM

Suspicious Activity Reporting System (SARS)

- Fully Searchable Database

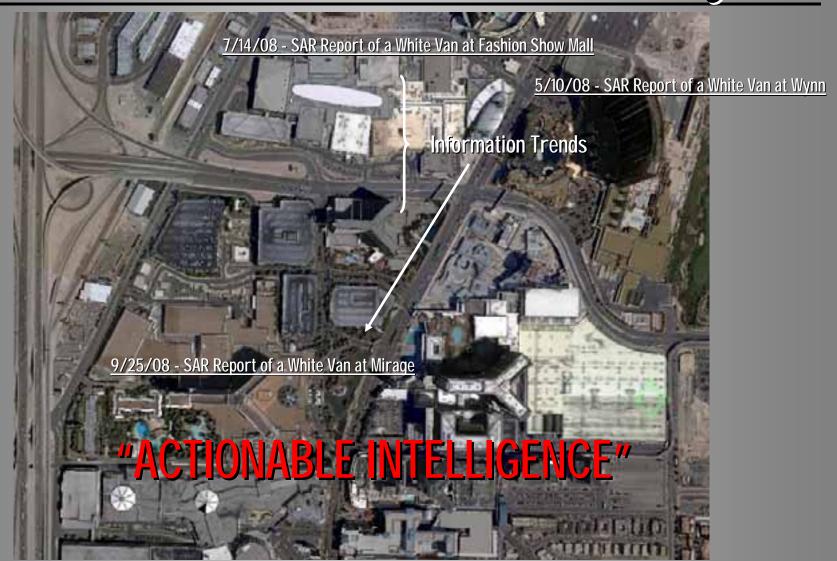
- Scalable to authorized personnel (Fusion Center-Crime, CT, etc.)

- Facilitates speedy identification of patterns and trends, across disciplines



SARS

Actionable Intelligence



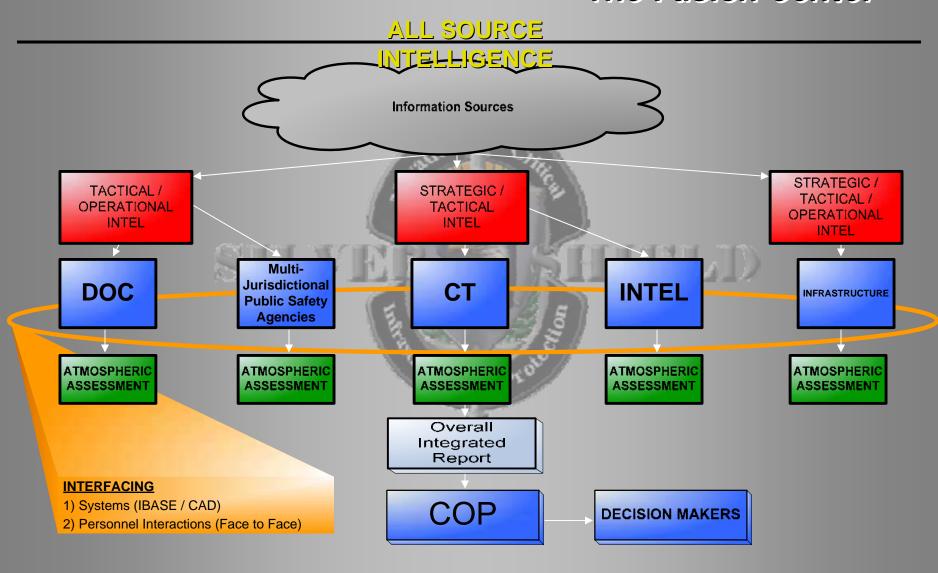
Protected Critical Infrastructure Information (PCII)
LAW ENFORCEMENT SENSITIVE

FUSION CENTER INTEGRATION

The Fusion Center - Definition and Operation of Fusion

- Unclassified Integrated multi-agency (FSLT) operation that facilitates the rapid exchange and analysis of cross-jurisdictional information stores
 - -Timely and Consistently between public safety and private sector entities to provide **early warning** of emerging threats (Terrorist/Pandemic or Natural Hazard).
- PREVENTION is paramount. If we are RESPONDING, we've failed!
- Fusion is about "SITUATIONAL AWARENESS" at such a level that <u>preemptive action</u> can be taken to thwart or mitigate an attack or all hazard event.
- Fusion creates the "COP-Common Operational Picture"

The Fusion Center -



The Fusion Center -How Fusion Works

<u>Step 1: Multi-Agency Integration & Interoperability:</u>

"All Eyes for All Hazards/Crimes"

- Public Safety: Police, Fire, Emergency Medical, Public Health
 - -LVMPD/Henderson PD/NLV PD
 - -County/City FD
 - -ARMOR Group (Hazmat Response)
- Federal Partners: FBI, FAA, DHS-NOC, FEMA, etc.
- Emergency Management: State DEM/County EM
- Critical Infrastructure Protection "Silver Shield" Program-Private Sector Partners (ILOs)
- Intelligence (Crime/Counter-Terror Analysis)

"CO-LOCATED INTO A "ONE-STOP SHOP"

The Fusion Center -How Fusion Works

Step 2: Collection, Assessment & Analysis of Information:

"Common Operating Picture-COP through Info-Sharing"

- Independent Analysis which results in an "Atmospheric Assessment" in each functional area derived from:
 - -OSINT Analysis
 - -Private Sector Analysis (SARs Reporting)
 - -Federal Database Monitoring (HSIN, RMIN, etc.)
 - -Crime Data Analysis
 - -Citizen Reporting Analysis (Hotline, 911/411, etc.)
- Provides "Context" for determining/understanding if there exists a terrorist "Nexus" (Link to National COP) or any pre-operational indicators of terrorism

The Fusion Center -How Fusion Works

Step 3: Production & Timely Dissemination of Products:

"Actionable Intelligence"

Information derived from multiple sources/entities that provides agencies (public/private sector) with a clear and accurate "operational picture" and hence, the ability to act preemptively/preventatively to thwart, mitigate and/or otherwise neutralize an impending threat

- Intelligence Bulletins & Advisories (SBU/LES/CUI/PCII)
- Intelligence Briefings
- Threat Assessments
- Red Teaming Exercises & Operational Efficiency Analysis (OEAs)

The Fusion Center -The Process

"Actionable Intelligence"

Information derived from multiple sources that provides public/private sector entities with a clear and accurate "operational picture" and hence, the ability to act preventatively!

"The Right Information into the Hands of the Right People & Organizations at the Right Time"

"The Right People"

- -Private Industry (Commercial Business/17 Sectors & LOIs)
- -Private Citizens

Tactical Emergency Response Plan - Demonstration

Tactical Emergency Response Plan

Special Events Markup Maps

Special Events Markup Previous Year

AS SOON AS POSSIBLE

Suspicious Activity Reporting Hotline:

(702) 828-8386 or 911

or at

WWW.SILVERSHIELDNEVADA.ORG

- Suspicious Activity Reporting Link



Ernest Chambers Jr.

Program Manager/Technical Lead

Cell: (702) 439-8955

Office: (702) 828-2223

Email: echambers@lvmpd.com

SUSPICIOUS ACTIVITY REPORTING HOTLINE: (702) 828-8386



Why is GIS Important to Law Enforcement, Security Professionals, and the Private Sector?

GIS enables the National Security Strategy

Tactical and Strategic Planning

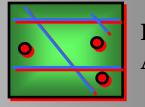






Event
Modeling, Training
And Forecasting





Incident Analysis

Better Situational Awareness
Faster response and higher immediate utility
Enabling Information Sharing

Common Operating Picture (COP)

A COP Involves....

- Integrating spatially enabled dynamic data with static spatial data relevant to a specific mission.
 - Dynamic data Weather, Tracking, Video, Sensors, Field Observations
 - Static Data Critical Infrastructure, Elevations, Imagery, etc.

A COP Provides....

- Situational Awareness
- Data Fusion
- Command and Control
- Incident Management

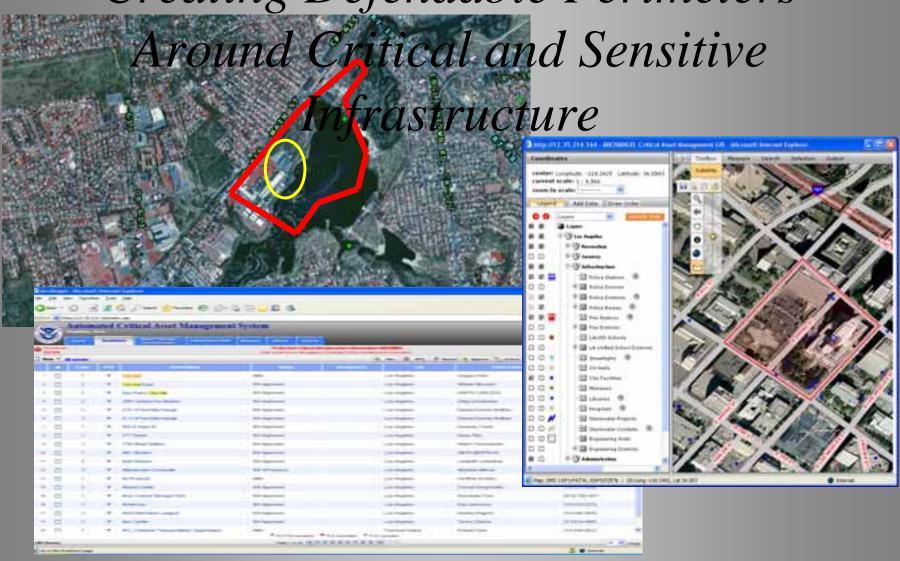


Critical Infrastructure Sectors

Agriculture Banking and Finance Chemical Industry Defense Industrial Base Emergency Services Energy Food Finance Government **Telecommunications** Postal Operations Public Health **Transportation** Water



Buffer Zone Protection Plans-Creating Defendable Perimeters



Author Knowledge, Information, and Data

GIS Servers Makes It available As a Service

Leveraging Knowledge and Tradecraft...(Recipes)



NCIPP PROGRAM



MISSION: Identify, catalogue, prioritize and implement protective strategies/counter-measures to protect critical infrastructure and key resources in support of Federal, State, Local & Tribal readiness, prevention, mitigation and response efforts

PROGRAM OBJECTIVES:

- 1. Identify CI/KR Statewide
- 2. Deploy Emergency Response Planning Tool for Responders
- 3. Implement an Infrastructure Liaison (Intelligence) Program
- 4. Deploy a Community Education & Awareness Program
- 5. Assessment (TVS-Threat/Vulnerability/Security) Program

"ALL EYES FOR ALL HAZARDS & CRIMES"

ASSESSMENT METHOD



NCIPPs Assessment Method is Risk Based and Checklist "Best Practices" informed: (Sensitivity to Time & other exigencies-Volume)

Assessment Model: (Critical Components)

- 1. Facility Characterization "Peeling the Onion" Approach
- 2. Threat Analysis "Targeting" or DBT (Designed Based Threat)
- 3. Policy & Process Analysis "Enterprise Approach/Systems"
- 4. CPTED (Crime Prevention Through Environmental Design)
- 5. System Effectiveness (Physical Protection Systems-PPS)

"ALL EYES FOR ALL HAZARDS & CRIMES"





SPECIFIC ASSESSMENT CONSIDERATIONS:

- PERIMETER/BOUNDARY CONCERNS
- NEIGHBORING ASSETS & INTERDEPENDENCIES
- BUILDING/FACILITY DESCRIPTION
- DESIGN BASED THREAT & CRITICAL NODES
- CPTED CONCERNS
- PARKING
- ACCESS CONTROL
- OPERATIONAL POLICY & PROCEDURES (SECURITY)
- SURVEILLANCE & CCTV
- HAZMAT

GIS: An Integrated Technology

GIS is a cross-departmental integrating technology used in all Critical Infrastructure Sectors to solve daily operational challenges.

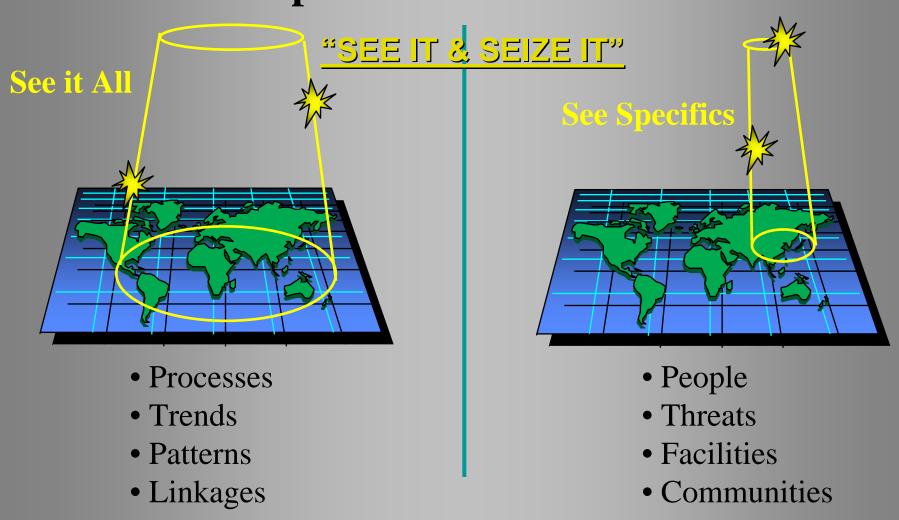


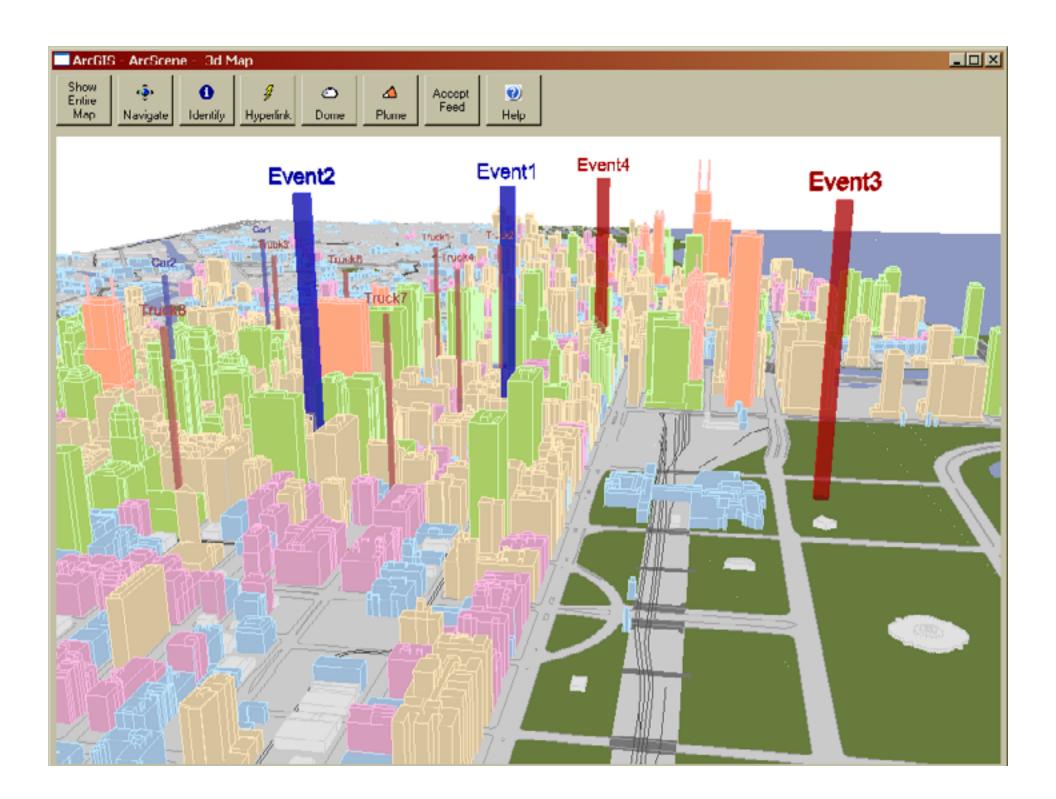
Data Fusion GIS Requirements

- An easy-to-use interface that can be queried, filtered, sorted, organized, etc. in a manner that results in meaningful information for the analysts -
 - Crime Patterns
 - Intelligence
 - Activity Flow
 - Geographic Profiling
 - Geographic Distribution
 - Association / Link Analysis
 - and much more

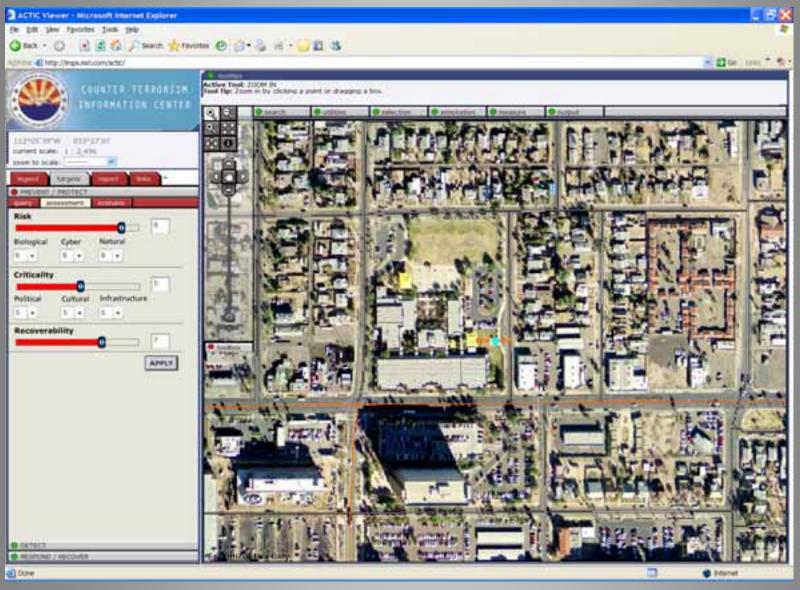


Moving Response & Command/Control Out of the Hypothetical Realm to that of "Real Time" Exploitation of the Data

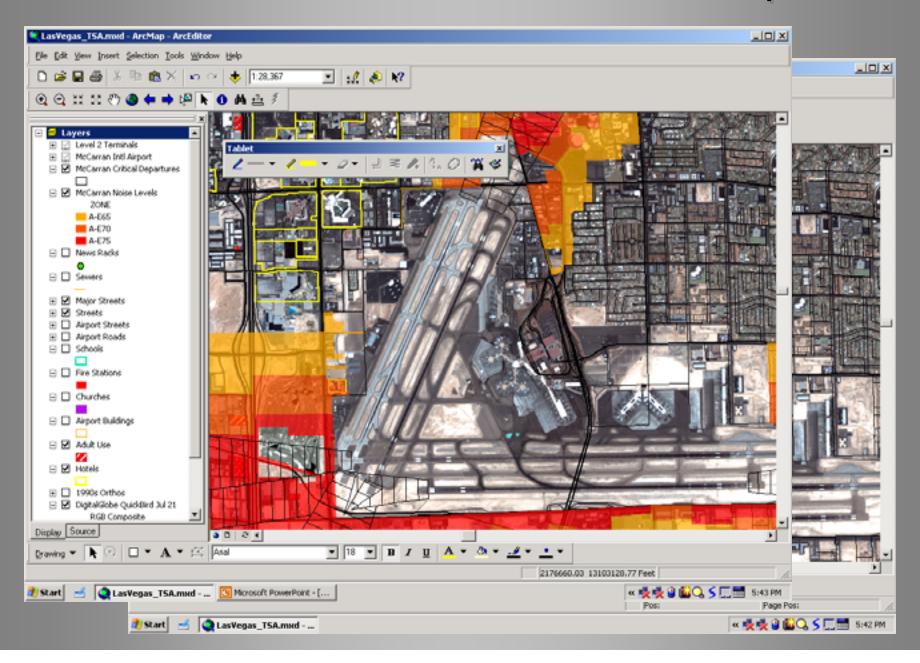




Counter Terrorism COP (ACTIC) Data Fusion Center



Critical Infrastructure Protection - Airport



Defining Critical Infrastructure - Emergency Response

NRS 463.790 (formerly AB250) requires all resort hotels to adopt and maintain "emergency response" plans, filed within 3 days with the local "first responder" agency whose jurisdiction includes the area in which the resort hotel is located and with the Division of Emergency Management of the Dept. of Public Safety

Epidemiological & Pandemic Alerting -Overview

- Pre-plot of Public Health Network+: Hospital ER Locations/ Community Clinics/
 Veterinary Hospitals with ERs/Animal Shelters/ Food & Beverage Manufacturers Processing Plants (? More ?) Web-Enabled or Internet Connected!
- GIS Map Overlays (Locality Specified)
- Deployed EPAS (Epidemiological/Pandemic Alerting System) to Public Health Network
- Analyze incoming EPAS SAR-Reports
 - Update Screening Database Continuously
- Evaluate & Activate Emergency Notification Network for Expert Analysis & Response

Epidemiological & Pandemic Alerting -

- Hospital Emergency Room

Veterinarian ERs

Food Processing Plants

- Scanning/Monitoring Emergency Response Channels

- Food Distribution Plants (Schools & Airliners, etc.)

Epidemiological & Pandemic Alerting -Emergency Rooms in Clark County



- -Mountain View Hospital
- -Health South Hospital of Tenaya
- -Summerlin Hospital
- -Lake Mead Hospital Medical Center
- -Health South Rehabilitation Hospital
- -Sunrise Hospital & Medical Center
- -Sunrise Children's Hospital
- -Montevista Hospital
- -Desert Springs Hospital
- -Spring Valley Hospital
- -Saint Rose Dominican Hospital (San Martin Campus)
- -Saint Rose Dominican Hospital (Rose de Lima Campus)
- -Health South Rehabilitation Hospital
- -Boulder City Hospital

Epidemiological & Pandemic Alerting -Animal Hospitals in Clark County



- -Island Pet Hospital
- -Craig Road Animal Hospital
- -Lone Mountain Animal Hospital
- -Ark Animal Clinic
- -Rainbow Animal Hospital
- -Sunrise Veterinary Clinic
- -Mauer Animal Clinic
- -Banfield the Pet Hospital
- -Desert Inn Animal Hospital
- -West Flamingo Animal Hospital
- -Mountain Vista Animal Hospital
- -Tropicana Animal Hospital
- -Cat Care Hospital: Goldsboro Heather DVM
- -Pebble Road-Maryland Parkway Animal Hospital
- -Sunridge Animal Hospital

Epidemiological & Pandemic Alerting -Food Processing Plants in Clark County



- -Basic Food Flavors
- -John Mull's Meat & Deer Processing
- -Three Dog Bakery
- -Harrison's Prime Meats Incorporated
- -Tmius
- -Desert Meats & Provisions
- -Memphis Championship Barbecue
- -Sterling Pacific Meat Company
- -Ital Vegas Incorporated
- -Tyson Foods

Epidemiological & Pandemic Alerting -Bottling/Beverage Plants in Clark County



- -Meadow Gold Dairy
- -Guido's Dairy Distributing
- -Restaurant Tea Services
- -Coca-Cola Bottling Company
- -Cream O'Weber Dairy Incorporated
- -Anderson Dairy Incorporated
- -Dairy Queen/Orange Julius Treat Center
- -Aquahealth
- -Silver State Vending
- -American Nutritional Corporation
- -Coca-Cola USA
- -Silver Springs Water
- -Cardinal Minerals Incorporated
- -American Water Star
- -Del's Lemonade
- -Nevada Beverage Company
- -Bonanza Beverage Company