Nevada’s Approach to Critical Infrastructure Protection

Presented by: Ernest Chambers Jr.

“All Eyes for All Hazards”

Protected Critical Infrastructure Information (PCII)
LAW ENFORCEMENT SENSITIVE
Infrastructure Protection Relies Heavily upon ESRI/ GIS related Technologies & Capabilities

“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’abal Suri advocate for ‘individual jihad’ (1604-page book Da’wat al-Mujahidin)
- Active Shooter (New York NY Hotel)
- Barricaded Suspect/Hostage Takers
- Suicide Bomber

GS 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
17 Critical Infrastructure Sectors Identified 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
Silver Shield ‘Buckets’

- Site Specific Data
  - Tier I/II
  - PCII
  - NADB

- General Information
  - LOIs
  - Executive Order
  - NRS 463.790-TERP

“Incident/On-Scene Responders”

Protected Critical Infrastructure Information (PCII)
LAW ENFORCEMENT SENSITIVE
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.
GIS

“Geographic Approach”

It Layers…
It Links…
It Exploits…
It Fuses…

Spatial Analysis
Modeling
Visualization
Imagery
Mapping
Data Management
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
HIGH-TECH PLATFORM
INTERCONNECTIONS
Special Event (New Year's Eve Sites)

Aerial Picture – Used for buffer zone & emergency planning

Protected Critical Infrastructure Information (PCI)
LAW ENFORCEMENT SENSITIVE
Resource Management Database

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

Protected Critical Infrastructure Information (PCII)
LAW ENFORCEMENT SENSITIVE
Tactical Emergency Response Plans (TERPs)

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

PRIVATE SECTOR PARTICIPATION

"ALL EYES FOR ALL HAZARDS & CRIMES"

Protected Critical Infrastructure Information (PCII)
LAW ENFORCEMENT SENSITIVE
**Suspicious Activity Reporting System (SARS)**

Encrypted online system for reporting suspicious activity/behavior:

- 128 bit encryption
- Submissions sent directly to assigned analyst
- Geared towards terrorist type activities
- Multiple subject, vehicle, & activity entries supported
- Support images & documentation upload

**Overview**

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Suspicious Activity Reporting System (SARS)ran on a web-based platform allowing users to report suspicious activities securely. The system supports 128-bit encryption for secure data transmission. Submissions are directly sent to assigned analysts, and the system is geared towards terrorist-related activities. It supports multiple entries for subjects, vehicles, and activities, and also supports image and documentation uploads. The platform includes features for tracking suspicious activities and documenting incidents, ensuring comprehensive reporting.

Protected Critical Infrastructure Information (PCI)

LAW ENFORCEMENT SENSITIVE
Suspicious Activity Reporting System (SARS)

Suspicious Activity Reports created in a standardized format to facilitate analysis!
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
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 preemptive action can be taken to thwart or mitigate an attack or all hazard event.

- Fusion creates the ‘COP: Common Operational Picture’
The Fusion Center

**ALL SOURCE INTELLIGENCE**

Information Sources

- TACTICAL / OPERATIONAL INTEL
- STRATEGIC / TACTICAL INTEL
- STRATEGIC / TACTICAL / OPERATIONAL INTEL

**INTERFACING**

1) Systems (IBASE / CAD)
2) Personnel Interactions (Face to Face)

**DOC**

- Multi-Jurisdictional Public Safety Agencies

**CT**

- INTEL

**INFRASSTRUCTURE**

- ATMOSPHERIC ASSESSMENT

**Overall Integrated Report**

- COP

- DECISION MAKERS
How Fusion Works

**The Fusion Center - How Fusion Works**

**Step 1: Multi-Agency Integration & Interoperability:**

“**All Eyes for All Hazards/Crimes**”

- Public Safety: Police, Fire, Emergency Medical, Public Health
  - LVMPD/ Henderson PD/ NLVPD
  - County/ City FD
  - ARMOR Group (Hazard 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 IN NOA, ONE-STOP SHOP**
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
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/CU/PCI)
- Intelligence Briefings
- Threat Assessments
- Red Teaming Exercises & Operational Efficiency Analysis (CEAs)
“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
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

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

Tactical and Strategic Planning

Event Modeling, Training And Forecasting

Improved Preparedness And Response

Policies And Procedures

Incident Analysis
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 Around Critical and Sensitive Infrastructure
Knowledge, Information, and Data
GIS Servers Makes It available As a Service

Leveraging Knowledge and Tradecraft...(Recipes)

- Data
- Information
- Maps
- Models
- Visualizations
- Metadata
- Workflows
- Analysis
- Intelligence

... From Desktop to Enterprise Services
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”
NCI PPs 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)
4. CPTED (Crime Prevention Through Environmental Design)
5. System Effectiveness (Physical Protection Systems-PPS)

“ALL EYES FOR ALL HAZARDS & CRIMES”
**SPECIFIC CONSIDERATIONS**

**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

“SEE IT & SEIZE IT”

See it All

See Specifics

- Processes
- Trends
- Patterns
- Linkages

- People
- Threats
- Facilities
- Communities
Counter Terrorism COP (ACTIC)
Data Fusion Center
Critical Infrastructure Protection - Airport
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.
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.)
- 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
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