Risk Assessment

Long Branch Public Schools
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“Where Children Matter Most”
The need to conduct threat, risk and vulnerability assessments in every school is evidenced by the random nature of school attacks which occur in schools regardless of their location, size, economic stature or diversity.

Information, techniques used in this presentation were derived from a collection of sources: FEMA, Homeland Security Comprehensive Assessment Model (HLS-CAM), The School Shooter, Critical Incident Response Group, National Center for the Analysis of Violent Crime, and the New Jersey Regional Intelligence Academy.

Walter J. O’Neill, Jr., the LBPS District Public Safety Liaison, is certified in School Based Threat, Risk, and Vulnerability Assessment by the National Domestic Preparedness Coalition and the Regional Intelligence Academy.

**The purpose of this class is to provide security observations/tools to those not certified as security professionals. Your observations are very important!**
• This is a very basic introduction to Risk Assessment
• Identify five (5) key zones of school security.
• Identify how decision models impact outcomes.
• Create list of specific vulnerabilities within your area of responsibility.
• Create an actionable plan to address an assigned vulnerability assessment.
• Recognize the importance of conducting and operating vulnerability & risk assessments.
• Campus perimeter
• Multi-building perimeter
• Exterior building perimeter
• Interior corridors
• Individual rooms & classrooms

Each zone has a unique set of security and access control requirements. For example, there is a significant difference in how you secure perimeter doors versus classroom doors.

5 Key Zones
• Decision Making is a process of identifying and choosing solutions that lead to a desired end result.

• Generally starts with a problem and ends with a solution or recommended course of action.

• Antecedents & Consequences
Models of DM

- Rational Model
- Normative Model
- Garbage Can Model
• Generally consists of structured four-step sequence
  
• Identifying the problem
• Generating alternative solutions
• Selecting a solution
• Implementing and evaluating the solution

Rational Model of DM
• Focus is more on the actual decision makers and the processes by which they work within a DM framework.
  • Focus is on a personal/environmental characteristics that reduce rational DM
    • Capacity of human mind
    • Problem complex/uncertainty
    • Amount and timelines of available information
    • Critical of decisions
    • Time frame/time demands

Normative Model of DM
• Usually three things: problematic preferences, unclear and poorly understood technology, and a high turnover of organizational positions.
  • Solutions may be proposed even when the problem does not exist.
  • Choices are made without solving problems.
  • Problems may persist without being solved

Garbage Can Model DM
• EXAMPLES OF THE DM MODELS

• Rational Model

• Normative Model

• Garbage Can Model

Class Exercise #1
• “Any weakness that can be exploited by an aggressor or, in a non-terrorist threat environment, make an asset susceptible to hazard damage.” FEMA

Vulnerability
“Potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences.” DHS
A “Process” to:
- Identify
- Quantify
- Rank & Prioritize
- Specific Vulnerabilities
Vulnerability Assessments

- A process that defines & identifies specific threats and weaknesses.

- Can be holistic: Multiple Risks

- Can be focused: Single Vulnerability
• Identify specific **Critical** Infrastructure Sectors within your area of responsibility.

• Identify additional risk areas.

**Class Exercise #2**
Chemical Sector

- Five (5) segments
  - Basic chemicals
  - Specialty chemicals
  - Agricultural chemicals
  - Pharmaceuticals
  - Consumer products
• Eight subsections
  • Public assembly (arenas, stadiums, etc.)
  • Sports leagues (professional, college, high school etc.)
  • Gaming (casinos, race tracks)
  • Lodging (hotels, motels, conference centers etc.)
  • Outdoor events (amusement parts, fairs, parades, beach)
  • Entertainment/media (broadcast TV sites etc.)
  • Real Estate (office, apartments condos, self-storage etc.)
  • Retail (shopping malls, stores etc.)
• This links to the following sectors:
  • The Energy Sector provides power to run cellular towers, offices, and other critical communications facilities.
  • The Information Technology Sector: provides critical control systems & services, physical architecture and internet infrastructure.
  • The Financial Sector relies on communication for the transmission of transactions and operations of financial markets.
  • The Emergency Services Sector depends on communications for directing resources, coordinating response, alerting the public, and receiving emergency 911 calls.
• Four (4) Critical industry types
  • Primary metal manufacturing; steel & iron
  • Machinery manufacturing; engine, turbine etc.
  • Electrical equipment
  • Transportation equipment manufacturing
• Dam projects
• Hydropower generation
• Locks
• Levees
• Dikes
• Hurricane barriers
• Water retention & Control facilities
• US Military Weapons, subsystems and components:
  • Research
  • Development
  • Design
  • Production
  • Delivery
  • Maintenance

Defense Base Sector
- Emergency Services Disciplines
  - Law Enforcement
  - Fire & Emergency Services
  - Emergent Management
  - Public Works
• Three (3) inter-relational segments:
  • Electrical
  • Petroleum
  • Natural Gas
• World-Wide Customer Services:
  • Deposit funds & make payments to other parties
  • Provide credit & liquidity to customers
  • Invest funds for both long and short periods
  • Transfer financial risks between customers

Financial Services Sector
• Farms, restaurants, food manufacturing
• Strongly dependent upon:
  • Water & wastewater systems, for clean irrigation
  • Transportation system, for movement of products
  • Energy, to power the equipment needed for food processing
  • Financial Services, Chemical & Dams
• Owned or leased by Federal, State, County, Local & Tribal Governments.

• Government & Military Buildings
• Educational Facilities
• National Monuments

Government Facilities Sector
• Hospitals & Health Care
  • Impacts all sectors
  • Dependent upon the other sectors
  • Protects from the following hazards
    • Terrorism/Infections Disease/Natural Disasters
• Essential to the Nation’s
  • Security
  • Economy
  • Public Health
  • Public Safety

Information Technology
Nuclear Sector

• Reactors, Materials and Waste Products
  • Power Plants
  • Non-Power Nuclear Research, Testing & Training Manufacturing
  • Transportation, Storage & Disposal of Radioactive Waste
Transportation Sector

- Seven (7) subsections
  - Aviation
  - Highway Infrastructure
  - Maritime
  - Mass Transit
  - Pipeline Systems
  - Freight Rail
  - Postal & Shipping
Water & Wastewater Systems

- Vulnerable to Contamination
  - Deadly Agents
  - Physical Attacks
  - Toxic Gases
  - Chemicals
  - Cyber Attacks
• **Proactive**: Acting before the event
  - Provides the ability to build trust and partnerships
  - Provides the ability to make solid decisions
  - Provides a tangible needs-based document that can assist with purchase requests
  - Reduces risk, liability, finger-pointing, and confusion when an event occurs.

**Proactive vs. Reactive**
• Reactive: Acting after the event
  • Loss of life
  • Loss of property
  • Loss of economic base
  • Loss of confidence, credibility, and trust
  • Less than optimum decision making
  • Increased liability and litigation

Proactive vs. Reactive
All Hazards Approach

- School Safety
- Catastrophic Weather Event
- Catastrophic Power Outage
• **Know Your Area**
  • What targets are you responsible for
    • Schools
    • Mass Transit
    • Critical Infrastructure
    • Site Security—your building
    • IT Security

• What are your weather concerns
  • Hurricane
  • Floods
  • Heat Wave

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**Vulnerability Assessments**
• **Know Your Area**
  - What are your traffic issues?
  - Where are your vulnerable populations?

• **What are your public’s concern?**

**The need for Vulnerability Assessments**
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- **Know Your Capabilities**
  - Planning, Preparedness & Mitigation
  - Training; internal/external
  - Exercises; tabletop, functional, full scale
  - Preparedness Plans
  - Response; personal, specialty vehicles & training
  - Recovery; outside assistance, equipment
The need for Vulnerability Assessments

- **Know Your Resources**
  - Personnel
  - Equipment
  - Supplies
  - Food & Water
  - Generators
Risk Formulas

- \( R = A + T + V \)
  - \( R \) – risk
  - \( A \) – assets
  - \( T \) – threat
  - \( V \) – vulnerability

- \( R = P \times C \times E \)
  - \( R \) – risk
  - \( P \) – probability of a threat
  - \( C \) – consequences of the threat
  - \( E \) – effectiveness of deterrents
• **Threat**
  • Likelihood of an attack or incident

• **Vulnerability**
  • Gap or flaw increases susceptibility to attack or disaster

• **Consequence**
  • Negative Impacts
Class Exercise #3

- **Threats**
  - Specific Targets/Events

- **Vulnerabilities**
  - Are you prepared

- **Consequences**
  - What would the outcome be
The Process

- Identify Assets & Abilities
- Assign Resource Value or Rank Importance
- Identify Vulnerabilities or Threats
- Mitigate or Eliminate Vulnerabilities
• **STEP 1**: Assessing Risk

• **STEP 2**: Assessing Vulnerabilities

• **STEP 3**: Assessing Consequences

**DHS Model**
STEP 1: Assessing Risk

- Potential Hazards
- Priority Concerns
  - Pose a risk to your community/Assets
    - Manmade or Natural Hazards
STEP 2: Assessing Vulnerabilities

- Identify weakness & threats for the following
  - Physical locations
  - Personnel (training/policy)
  - Equipment
STEP 3: Assessing Consequences

- Loss of life
- Loss of property
- Loss of credibility, confidence, morale
- Lawsuits
- Economic Impact
• High Probability: at least 1x a year

• Moderate Probability: Occurrence every 2-10 years

• Low Probability: Occurrence every 10-15 years
Impact

- Loss of Life and/or Property
  - High
  - Moderate
  - Low
Planning Thoughts

- Geographic Features
- Bodies of water
- Low lying areas
- Flood zones
• Population Concentrations
  • Apartment Buildings
  • Townhouse/Condos
  • Schools
  • Transportation Centers
  • Group/Nursing Homes
  • Office Buildings
  • Industrial Parks
  • Stadiums
  • Concert Halls
  • Amusement Parks/Beach Front
  • Parks
• Population Shifts
  • Location
  • Time
  • Date/Day of Week
  • Daily
  • Weekly
  • Seasonal

Planning Thoughts
Planning Thoughts

- Critical Public & Private Facilities
  - Police/Fire/EMS
  - Public Works
  - DOT Yards
  - Pumping Stations
  - Shelters
  - Hospitals
  - Medical Facilities
  - Governmental Buildings
  - Rental/Emergency Equipment Locations
  - Storage Areas
• Vital/Critical Infrastructure
  • Roads
  • Railways
  • Bridges
  • Power Stations
  • Water Treatment Plants
  • Airports
  • Bus/Train/Ferry Services
  • Military Bases

Planning Thoughts
• Identify all the strategic partners and assign them among the three groups.

• Identify and list specific items
  • Skills
  • Resources
  • Needs
  • Gaps/Threats/Vulnerabilities/Consequences

• Group 3
  • Catastrophic Weather Event

• Group 2
  • Mass Transit

• Group 3
  • Active School Shooter
• Identify the likely threats
  • Identify strategic partners

• Assess how these **DANGERS WILL EFFECT** your AOR
  (Area of Responsibility)

• Manage & Mitigate the risk

• Develop appropriate responses
  • Pre-Event
  • Event
  • Post-Event

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**From Theory to Practice**
• Natural Disasters
• Man-made Disasters
• Biological
• Technological

All Hazards Preparedness
• Questions
• Concerns
• Comments

REVIEW TIME/FINAL EXAM
Long Branch Public Schools

“Where Children Matter Most”