HAZARD VULNERABILITY ANALYSIS:

WHAT IS IT?
HOW DO I GET ONE?
WHAT DO I DO WITH IT?

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WHO AM I:

- MS in Emergency Management
- BS in Psychology
- ADN Registered Nurse
- Graduate of National Emergency Advanced and Executive Academies
- Retired Fire Chief
- Former City/County Emergency Manager
- Retired Army Nurse/Nursing Supervisor
- Current healthcare emergency preparedness consultant

OBJECTIVES:

- Attendees will be able to identify what a Hazard Vulnerability Analysis (HVA) is, as well as other common terms that refer to the same process.
- Attendees will know and be able to demonstrate the steps in creating an HVA.
- Attendees will know and verbalize the next steps in using an HVA, including staff training and meeting annual exercise requirements.
- Attendees will verbalize how to incorporate other agencies, organizations, and entities in the HVA and training & exercise process.

WHAT IS A HAZARD VULNERABILITY ANALYSIS (HVA)?

Definition: A systematic process for identifying potential threats, assessing their likelihood and impact, and prioritizing them to develop mitigation and preparedness strategies

Other Names: Risk Assessment, THIRA, EHS Assessment, Hazard Mitigation Assessment

WHAT DOES AN HVA DO?

- Identifies man-made, natural-, and technological events that can cause harm to staff, residents, visitors, and business operations.
- Identifies the frequency of those disasters
- Provides framework for identifying the impact on life and business lines

HOW DO YOU USE AN HVA?

- Identify risks
- Identify mitigation efforts
- Drives training and exercise plans
- Identify new risks and remove non-applicable risks
- Use to validate purchases, capital projects, grant writing etc.

HOW DO WE CREATE AN HVA?

- Math
  - =((B2*3)+(C2*2)+D2+E2+F2)/8
- Subjective Evaluation
  - Please don't
- Wild Assed Guesses or WAGs
  - REALLY, Please don't

Event	Probability	Magnitude/Severity	Impact	Time of Onset	Duration	Calculated Risk
SAMPLE	1	1	1	1	1	1
SAMPLE	2	2	2	2	2	2
SAMPLE	3	3	3	3	3	3
SAMPLE	4	4	4	4	4	4
SAMPLE	5	5	5	5	5	5
Active Assailant						0
Agricultural Pest/Disease						0
Air Quality Hazards						0
Communication Failure						0
Cyber Attack						0
Dam/Levee Failure						0
Drought						0
Earthquake						0
Erosion						0
Extreme Heat						0
Flood						0
Foodborne Illness						0
HAZMAT Incident						0
Landslide						0
Loss of Access						0
Pandemic/Epidemic						0
Potable Water Contamination						0
Power Outage						0
Public Unrest						0
Severe Weather						0
Severe Winter Weather						0
Supply-Chain Disruption						0
Terrorism						0
Tornado						0
Transportation Accident						0
Tsunami						0
Vector-Borne Disease						0
Volcano						0
War/Warlike Attack						0
Water/Sewer Failure						0
Wildfire						0
Winter Weather						0

CORE PARTS OF AN HVA?

Magnitude – How Bad is It

Probability – How Likely is It

Impact – How Much Will it Affect You

Onset – How Much Warning Do You Get

Extent – How Long Will the Effects Last

PROBABILITY

- Probability of a hazard event occurring in the future was assessed based on hazard frequency over a 100- year period (where available). If the hazard lacked a definitive historical record, the probability was assessed subjectively based on regional history and other contributing factors.
  1 – Less than 1% probability in the next 100 years.
  2 - Between 1% and 10% probability in the next year, or at least one chance in the next 100 years.
  3 - Between 10% and 100% probability in next year, or at least one chance in the next 10 years.
  4 - 1 event per year
  5 – Multiple events expected per year

MAGNITUDE

- Magnitude is a measure of the strength of a hazard event.
  1 - Less than 5% Very minor impact to people, property, and continuity of business at 90%.
  2 - 6% to 24% Injuries or illnesses minor in nature, with only slight property damage and continuity of business only slightly impacted, with 80% functionality.
  3 - 25% to 49% Injuries result in some permanent disability; moderate property damage ; moderate facility impact; business at 50% operational capacity with service disruption more than one week, but less than a month.
  4 - 50% to 75%, Injuries and illness resulting in permanent disability and death to more than 50% of the population; severe property damage greater than; limited services provided, with disruption anticipated to last beyond one month.
  5 – Greater than 75%. Injuries and illness resulting in permanent disability and death to more than 75% of the population; severe property damage greater than 50%; business significantly impacted; no mutual aid services provided, with disruption anticipated to last beyond one month.

IMPACT

- The measure of the percentage of the people and property within the nation would be affected.
  1 – Less than 10% affected. Few if any injuries or illness.
  2 - 10% to 24% Minor injuries and illness. Shutdown of essential facilities and services for 4 to 24 hours.
  3 - 25% to 49% Serious injury and illness. Shutdown of essential facilities and services for 24 to 72 hours.
  4 - 50% -75% affected. Multiple deaths. Property destroyed or damaged beyond repair Complete shutdown of essential facilities and services for 3 days or more.
  5 – Greater than 75% of the facility affected. Mass casualty event. Most property destroyed or beyond repair.

ONSET

- The rate or speed that an event occurs. The warning time prior to the event occurring.

  1 – Greater than 24 hours of warning time

  2 – 12-24 hours of warning time

  3 – 6-12 hours of warning time

  4 – Less than 6 hours warning time

  5 – No warning time

DURATION

- Defined as the time span associated with the event.

  1 – Six to twenty-four hours

  2 – twenty-four hours to 72 hours

  3 – 72 hours to 1 week

  4 – 1-4 weeks

  5 – Greater than 1 month

MAKING AN HVA

I HAVE AN HVA - NOW WHAT?

- Creates a prioritization of hazards to build or refine your Emergency operations Plan
- Identifies opportunities to reduce the risk of some hazards
- Helps develop hazard-specific annexes to your plan

I HAVE AN HVA; NOW WHAT?

- Drive staff training
  - New Staff
  - Monthly Training
  - Quarterly Training
  - Annual Training & Exercises

I HAVE AN HVA; NOW WHAT?

- Drive the Annual Exercise development
  - Progressive exercises – Crawl, Walk, Run
    - Workshops
    - Table-Top Exercises
    - Full-scale Exercises

COMMUNITY-BASED PLANNING, TRAINING & EXERCISING

- Why?
  - Resident care is #1 – Staff/Visitor Care is #2
  - Planning, Training, & Exercising = Less Chaotic Real-World Events
- Plan and Prepare as a Team
  - Be prepared to weather the storm alone
- Serving your community
  - Are you apart of the Community EOP?
    - None of the time, some of the time, all the time.

REVIEW

- We have learned to identify what a Hazard Vulnerability Analysis (HVA) is, as well as other common terms that refer to the same process.
- We have learned how to demonstrate the steps in creating an HVA.
- We have learned the next steps in using an HVA, including staff training and meeting annual exercise requirements.
- We have learned how to incorporate other agencies, organizations, and entities in the HVA and training & exercise process.

QUESTIONS?