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Public Health Hazard & Vulnerability Assessment

Jennifer Williams, RS, MPH
Florida Department of Health
Div of Environmental Health
Office of Preparedness



EH Preparedness



Presentation Outline

- Define PH HVA
- Federal Directives
- Existing FL HVA Efforts
- FL PH HVA Program Objectives
- Examples of Projects



PH HVA Definitions

- Hazard
 - A potential threat to humans and their welfare
- Vulnerability
 - The extent to which a person, group or socio-economic structure is likely to be affected by a hazard (susceptibility and resilience)
- Risk = Hazard x Vulnerability
 - The likelihood of a specific disaster event occurring and its probable consequences for people and property



Traditional HVAs don't take into consideration key factors that may affect *public health* vulnerability

- Socio-economic status
 - Demographics
 - Economic indicators
 - Education
 - Linguistic
- Health status
 - Health indicators
 - Health finance
 - Healthcare access
- Geospatial analysis
 - Geographical isolation
 - Population density
 - % urban population
- Preparedness analysis
 - Public risk perception
 - Public health preparedness quotient
 - Hospital preparedness quotient(s)



Factors That Affect PH Vulnerabilities

- Poverty
- Childhood/Elderly
- Gender
- Disability
- Lack of information, education and communication
- Lack of experience and process
- Inadequate healthcare
- Geographical location / isolation
- Inadequate social and organizational integration / coordination
- Inadequate preparedness and mitigation
- Malnutrition
- Inappropriate developmental policies
- Food insecurity
- Societal stratification
- Poor water and food quality
- Limited state & local resources
- Political perceptions
- Negative social interactions: administrative graft / corruption, competition
- Lack of social order
- High burden of illness and/or injuries



Directives/Requirements- US Dept of Health and Human Services

- Health Resources and Services Administration (HRSA), Healthcare Systems Bureau
 - National Bioterrorism Hospital Preparedness Program
 - <http://www.hrsa.gov/grants/default.htm>
- Centers for Disease Control (CDC), Public Health Emergency Preparedness
 - Cooperative Agreement (2006)
 - <http://www.bt.cdc.gov/planning/coopagreement/#fy06>



HRSA Guidance

- “public health departments, in conjunction with hospital and other healthcare entities, law enforcement and other first responders, engage in active planning and information sharing around HVAs...already conducted”
- “Ensure that response plans are in accordance with identified and predictable scenarios”



HRSA Critical Tasks

- Decrease the time to intervention by identification and determination of potential hazards and threats, including quality of mapping, modeling and forecasting
- Decrease human health threats associated with identifying community risks and vulnerabilities
- Through partners, increase capability to monitor movement of releases and formulate PH response and interventions based on dispersion and characteristics over time



HVA Supports HRSA Priorities & Critical Benchmarks

- **#2-1 Surge Capacity: Beds, Minimal Level of Readiness** – ‘events that could adversely affect the quality, capacity and continuity of healthcare operations for each participating hospital and other healthcare facility and describe plans to mitigate consequences.’
- **#2-1 Number of participating hospitals**
- **#2-1 Number of beds**, above the current daily staffed bed capacity, in other regions of the state for which predictable high-risk scenarios have been identified through HVA (within 3 hours post-event and within 24 hours post-event)
- **#2-2 Capacity to maintain at least one suspected highly infectious disease in negative pressure isolation** (within 3 and 24 hours post-event).



HVA Supports HRSA Sentinel Indicators

- #2-5 Number of hospitals that have access to **pharmaceutical caches** to cover hospital personnel, first responders and associated family members for 72 hour period
- #2-6 Numbers of **PPE** to protect current and additional health care personnel deployed
- #4-1 Number of **hospital lab personnel trained** in the protocols for referral of clinical sample and associated information
- #4-2 Number of **EMS providers, poison control centers, community health centers**
- #5 Number of **healthcare personnel trained** through competency-based programs
- #6 Number of **drills or exercises** conducted that include hospital personnel, equipment or facilities, drills or exercises that focus on CBRNE



CDC Cooperative Agreement

- “Recipients required to develop a risk mitigation plan based on HVA...to ensure that the public health consequences of them are minimized.”
- “The State HVA should be a compilation of assessments from local jurisdictions and any other risks identified by the state.”



Department of Homeland Security Target Capabilities List

- Defines capabilities needed to achieve national preparedness
- Phase I – primary focus was response
- Phase II (initiated summer 2006) – focuses on capabilities that support the prevention and protect missions and long-term recovery



Target Capabilities Identify:

- Need for geocoding (critical infrastructure, EH facilities, PH facilities, resources, etc)
- Building capacity to share information/data
- Building capacity to analyze data (GIS techs)



PH HVA Program for FL Counties

- Purpose:

- To identify and prioritize hazard probability and potential impact
- To estimate population vulnerability according to standard indicators
- To identify gaps in public health resources
- To assess feasibility and define protective strategies, based on HVA data foundation, to define appropriate protection, prevention and mitigation strategies for potential public health consequences



PH HVA Program Objectives

- Populate ArcCatalog with pertinent data for Florida
- Survey FL counties for capabilities and prioritize assistance for regional/county level PH HVAs
- Ensure data availability/analysis tools for each CHD
- Regional workshops to train and assist
- Ongoing evaluation of efforts
- Assessment of Chemical Antidote Program in FL
- Assessment of Drought and Wildfires in FL



Compilation of FL HVA Efforts

- **Dept. of Community Affairs** – regulates chemical storage facilities
- **Dept. of Health** – assisting with hospital HVAs
- **Law Enforcement** – Critical Infrastructure Assessment
- **County Emergency Management** – Local Mitigation Strategies (LMS)
- **Other Partners**
 - RDSTFs
 - Department of Environmental Protection
 - Department of Agriculture & Consumer Services
 - Department of Elder Affairs
 - Agency for Health Care Administration

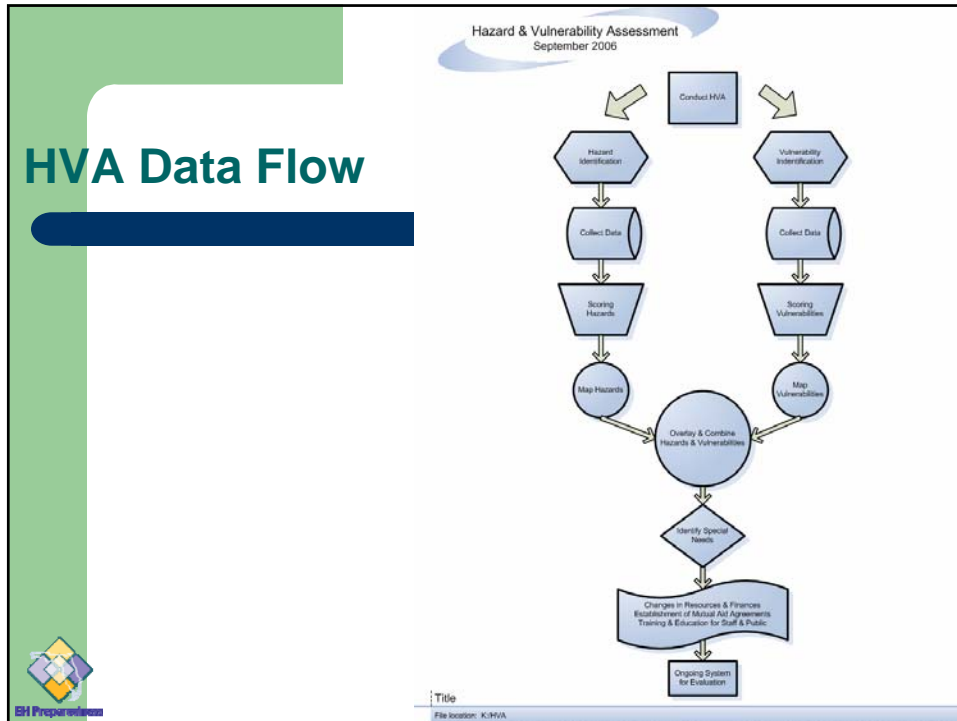


HVA Process Checklist

- I. Title/Issue/Scenario
- II. Introduction/Discussion
 - a. Purpose
 - b. Scope
- III. Data/Background Information/Analysis
 - a. Literature Search – peer reviewed
 - b. Internal existing documents
 - c. Data Sources
 - i. Demographics
 - ii. Environmental concerns
 - iii. Health care data
 - iv. Critical Infrastructure
 - v. Logistics/resources
 - vi. Hazards
 - d. Caveats and limiting parameters, constraints, restrictions
- IV. Data Analysis
 - a. Data Overlay
 - b. Data Display – GIS
- V. Summary/Recommendation
 - a. Primary
 - b. Alternate
- VI. Appendices
 - a. Glossary
 - b. References



HVA Data Flow



<http://def.sharepoint.doh.ad.state.fl.us/DEH/Preparedness/hva.aspx>

Hazard-Vulnerability Assessment

The EH Office of Preparedness is developing a Hazard & Vulnerabilities Assessment (HVA) which is a risk mitigation plan in the fiscal year 2006-2007. The HVA will assess and identify community specific hazards and vulnerabilities so that plans may be developed to reduce or eliminate these threats for the public health of Florida.

Questions on HVA? Please contact Jennifer Williams, Hazard & Vulnerability Analyst, Phone (850) 245-4444 x 2610.

The Plan, (Hazard and Vulnerabilities Assessment) contains plan for preparing and responding to public health threats throughout Florida.

County-specific Document Library relating to HVA folders for each of the 67 CHD's containing their unique county information.

HVA Chemical Antidote HVA Working Group (WOG) Team that works on assessment of chemical antidotes for EMS Providers.

HVA Support Documents Document library containing general HVA-related support documents.

HVA Stakeholders Our stakeholders in this HVA initiative, including contact information.

HVA - Drought & Wildlife Plan Documents, emerging events team info, links, all relating to Drought & Wildlife.

Resources

- EPA's Technical Guidance for Hazard Analysis
- Tech Guide for Hazards Analysis
- EPA Publications: SERC/LEPC Documents
- USC Hazard & Vulnerability Research Institute
- Iowa Hazard Analysis & Risk Assessment 2003 Local Guidance
- FL DCA Local Mitigation Strategy Guidebook

Note: When you "Add new link", please ensure that you select "HVA Links" from the drop down list if it belongs on this HVA site (we filter out the "Resource" links depending on what page we want these links to appear).

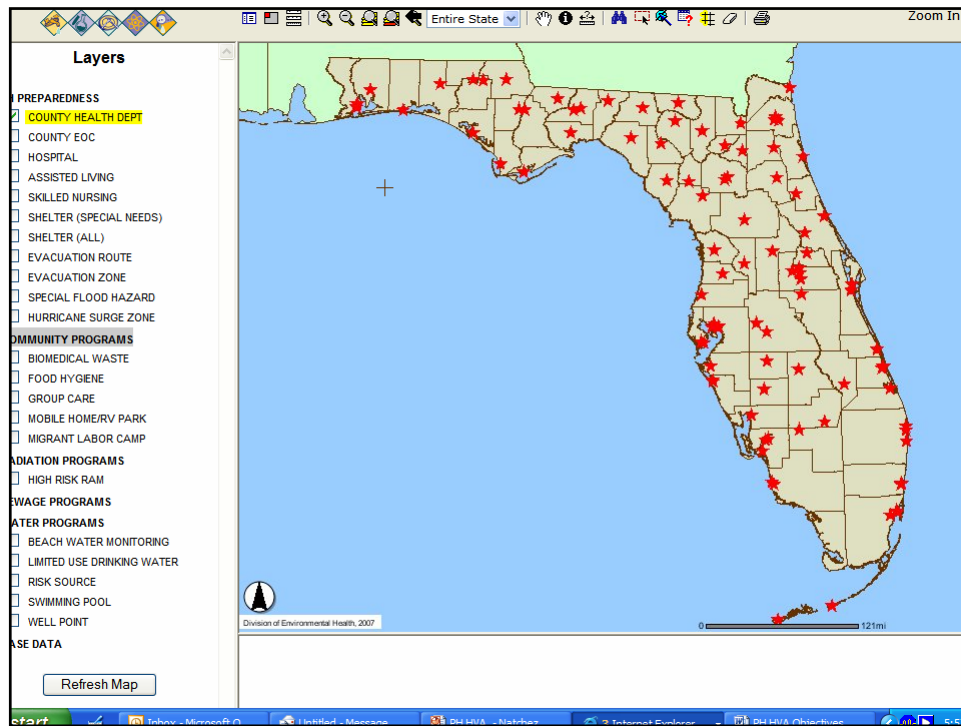
HVA Discussion Area

New Discussion | Expand/Collapse

EH Preparations



EH Preparedness



PH HVA of Chemical Antidote Program

- **Purpose** - Assessment of chemical antidotes for EMS responders and its effectiveness in protecting public health of Florida
- **Data Sets**
 - EMS providers – EMTs and Paramedics
 - ALS & BLS trucks, air support
 - Pharmaceutical cache locations
 - Hospitals – personnel counts for PPE and potential treatment
 - Population densities, critical infrastructure, large venues (all indicators for potential targets)



PH HVA Drought & Wildfires

- **Purpose** – To assist in planning and operation phase for ESF8 response
- **List of Subject Matter Experts**
 - Epidemiology
 - PH Nursing
 - Public Information Officer
 - EH – Air and Water
 - Behavioral Health
 - Pediatrics
 - Animal
 - Medical Advisor
 - Evacuation/Sheltering
- **Objectives**
 - Brainstorm scenarios and potential concerns
 - Develop IAP objectives
 - Predetermine data sets for planning and response
 - Develop map templates for decision making
 - Define roles and responsibilities for EH

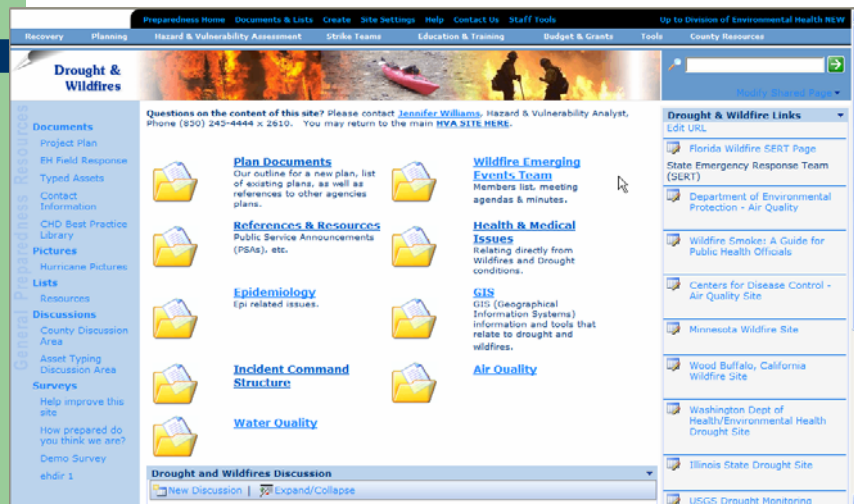


PH HVA Drought & Wildfires

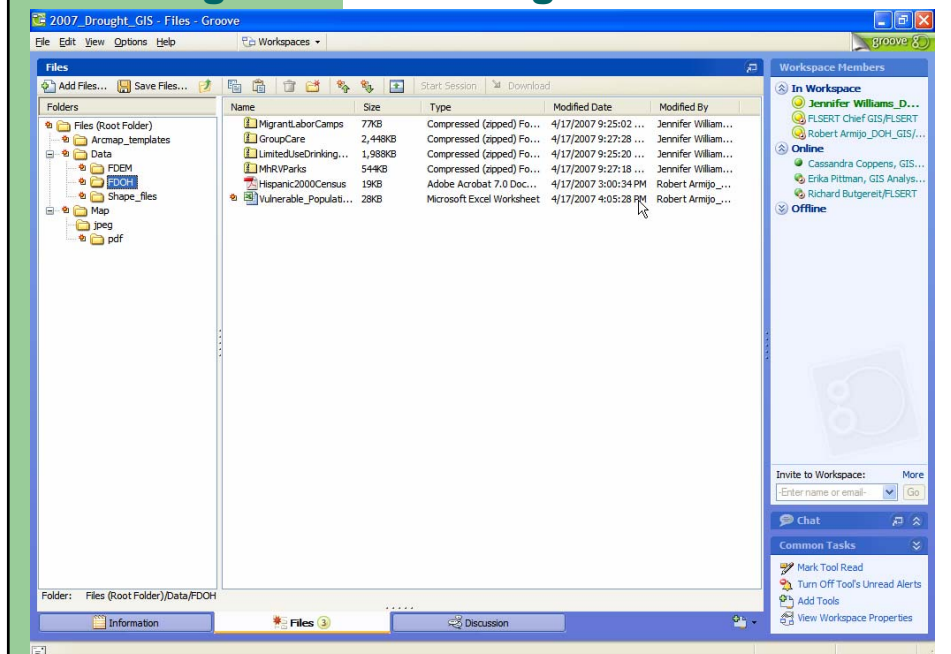
- **Examples of mapping scenarios**
 - fires and evacuation of critical infrastructure (hospitals, SNF, ALFs, schools, etc)
 - Smoke plumes and vulnerable populations (asthma, cardiovascular disease, etc)
 - Smoke/fire estimates for distribution of Public Service Announcements
 - EPI surveillance data for PSAs and direct resources
 - Drought information and well water quality issues (chlorides, water conservation, etc.)



<http://def.sharepoint.doh.ad.state.fl.us/DEH/Preparedness/droughtfire.aspx>

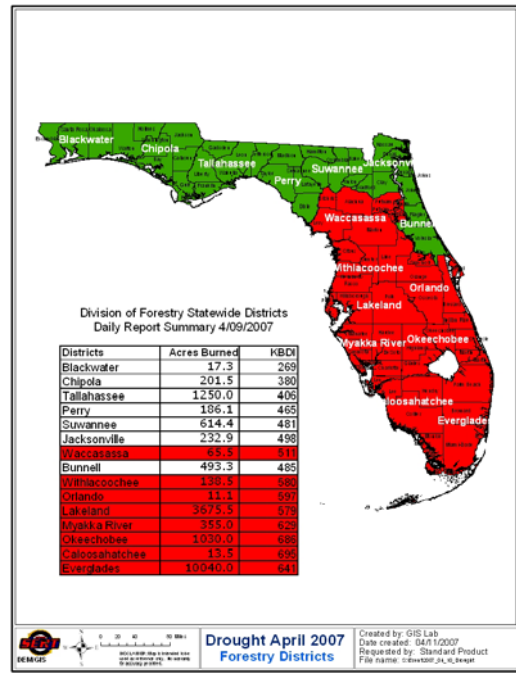


Sharing Data Across Agencies - Groove

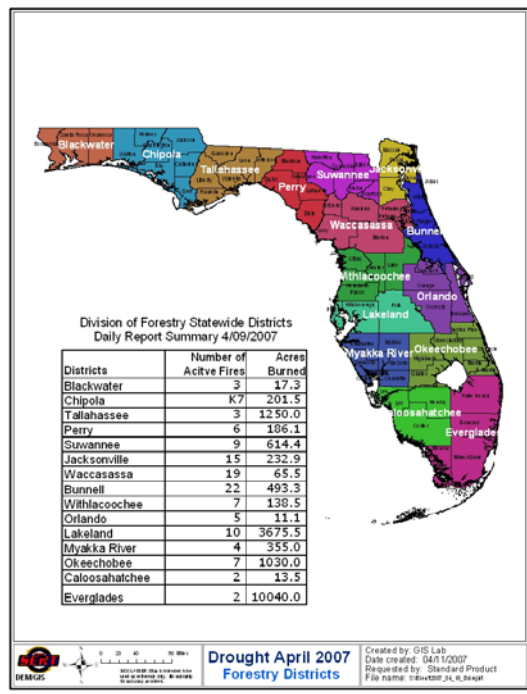


FL Acres Burned/ Drought Index

- KBDI – Keetch
Byram Drought
Index
 - 0 = no moisture
deficiency
 - 800 – maximum
drought possible



Active Fires/ Acres Burned



Theory Into Practice

- Justification for resource allocation
- Establishment of MOA's across HVA county stakeholders
- Targeting training & education for program direction and public awareness
- Educate local emergency management
- Ongoing system for evaluation, changing trends and conditions

