

The background features several overlapping, wavy lines in various shades of green, ranging from light lime to a darker forest green. These lines flow from the left side of the frame towards the right, creating a sense of movement and depth. The lines are composed of many thin, parallel strokes that blend together to form a soft, ethereal effect.

Bringing Focus to LEPCs, Recharging their Functions and Measuring Success

Timothy R Gablehouse
Member, Colorado Emergency
Planning Committee (SERC)

HOW DID WE GET HERE?
WHY SHOULD YOU CARE?
WHAT DOES IT MEAN TODAY?

- ▶ IT IS IMPORTANT TO UNDERSTAND THE ANSWERS TO THESE QUESTIONS.
- ▶ BUT FIRST, BHOPAL
 - ▶ IT DEFINES WHERE WE STARTED AND WHY

WHY WAS BHOBAL SUCH A BIG DEAL?

- ▶ CERTAINLY NOT THE FIRST MAJOR INDUSTRIAL ACCIDENT
- ▶ IT WAS THE LARGEST LOSS OF LIFE BY TWO ORDERS OF MAGNITUDE
- ▶ GROWING POLITICAL CONCERN OVER THE IMPACT OF DEVELOPED COUNTRIES ON DEVELOPING COUNTRIES
- ▶ “TOXIC CHEMICAL” KILLED INNOCENTS AS THEY SLEPT

- ▶ EPCRA WASN'T THE FIRST RESPONSE TO BHOPAL
- ▶ THE UNITED NATIONS ENVIRONMENT PROGRAM CREATED APELL
 - ▶ ALL-HAZARDS, COMMUNITY BASED AWARENESS AND PLANNING
- ▶ MANY COUNTRIES HAVE THEIR OWN SIMILAR PROGRAMS



UNEP



AWARENESS AND PREPAREDNESS FOR EMERGENCIES AT LOCAL LEVEL

*A process for improving
community awareness and
preparedness for technological
hazards and environmental
emergencies*

UNITED NATIONS ENVIRONMENT PROGRAMME



2ND EDITION – 2015

POLITICS OF THE US AT THE TIME

- ▶ GROWING ENVIRONMENTAL CONCERNS
- ▶ DISCOVERY OF MANY ABANDONED WASTE SITES - the "Superfund Program"
- ▶ DEEP MISTRUST OF INDUSTRY
 - ▶ Near misses & contamination
- ▶ TITLE III OF SARA
 - ▶ 1986 - SIGNED BY PRESIDENT REAGAN
 - ▶ CONTROL OF THE SENATE WAS AT STAKE

LESSONS FROM BHOPAL



20th Anniversary of Bhopal Conference
Indian Institute of Technology, Kanpur, India
December 1 to 3, 2004

BASICS

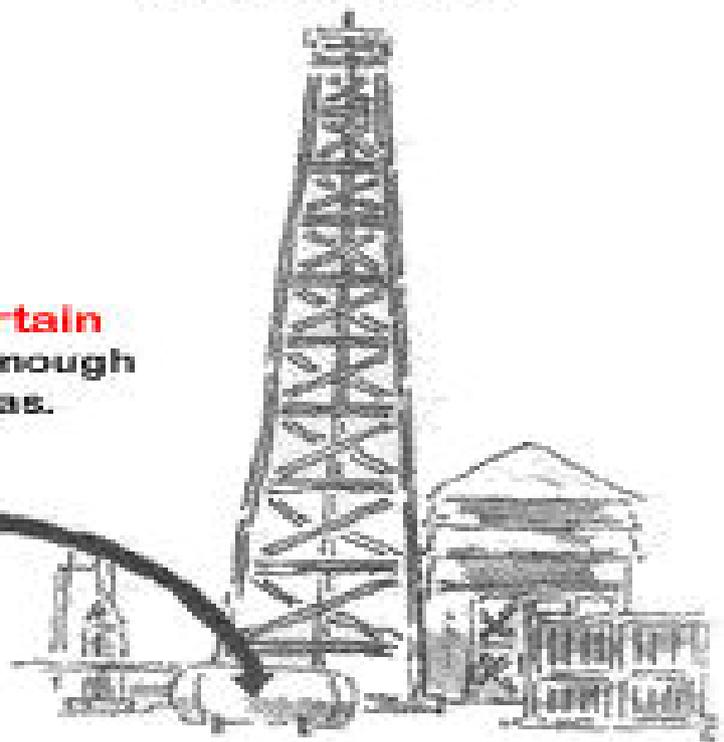
- ▶ **THE RELEASE OCCURRED WHEN WATER WAS MIXED WITH MIC**
- ▶ **THE WATER WAS BEING USED IN ROUTINE LINE CLEANING**
 - **NOT SABOTAGE**
- ▶ **FOUR SYSTEMS DESIGNED TO PREVENT OR MITIGATE THE ACCIDENT EITHER FAILED OR WERE TURNED OFF**
- ▶ **MIC IS AN IRRITANT – NOT DEADLY**
 - ▶ **THE REACTION PRODUCTS WERE DEADLY**



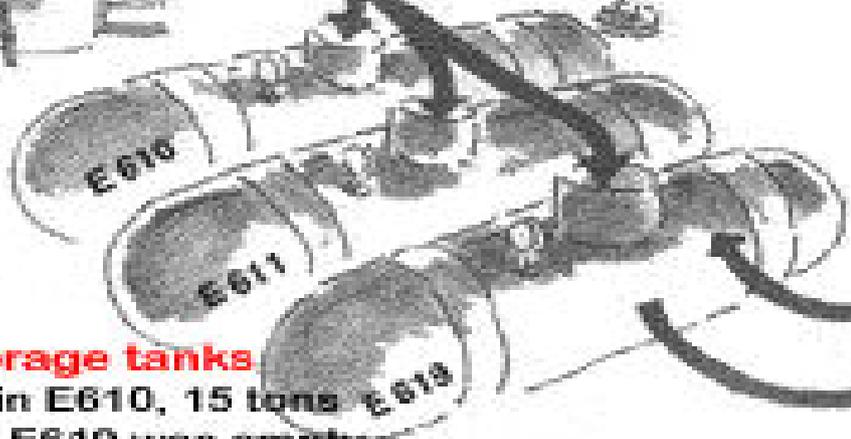
Vent gas scrubber
Leaking gas could have been detoxified, but the scrubber was turned off.



Water curtain
Not high enough to reach gas.



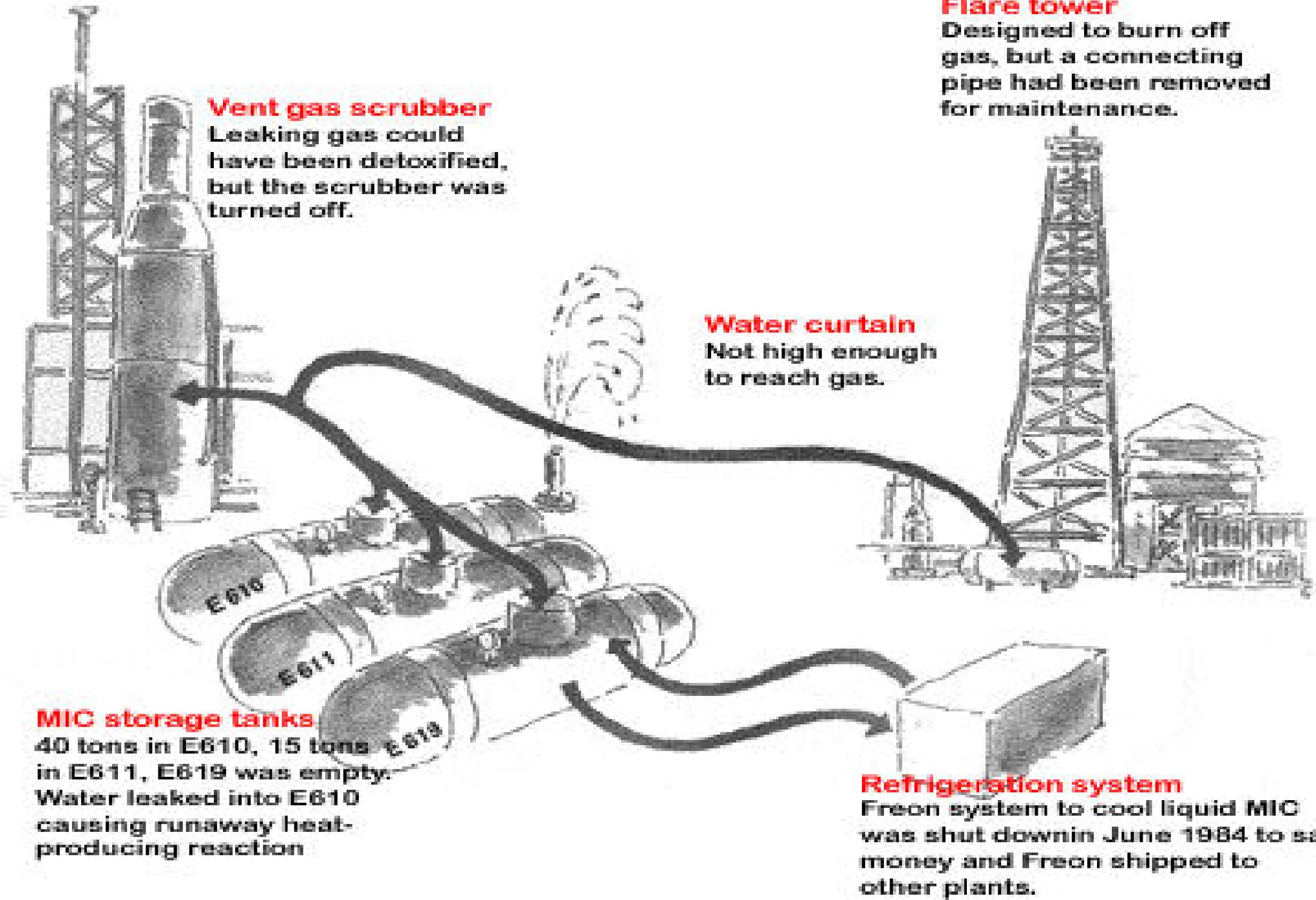
Flare tower
Designed to burn off gas, but a connecting pipe had been removed for maintenance.



MIC storage tanks
40 tons in E610, 15 tons in E611, E619 was empty. Water leaked into E610 causing runaway heat-producing reaction



Refrigeration system
Freon system to cool liquid MIC was shut down in June 1984 to save money and Freon shipped to other plants.



Bhopal



OUTCOMES

- ▶ **“OFFICIAL” CASUALTY COUNTS RANGE FROM 3,400 TO 7,500**
- ▶ **NGO & OTHERS ESTIMATE 20,000+**
- ▶ **MOST BODIES BURIED OR CREMATED WITHIN A DAY OR TWO**
- ▶ **MASS GRAVES ARE STILL FOUND**

Bhopal



THE BHOPAL DISASTER

- 520,000 – 730,000 exposed
- > 200,000 were below 15 years of age
- > 3,000 were pregnant women
- 8,000 (?) died during first weeks
- 8,000 (?) since
- 100,000 – 200,000 have permanent injuries



LEGAL STATUS

- ▶ **CRIMINAL CHARGES PENDING AGAINST UC CEO & INDIAN INVESTORS**
- ▶ **UC PAID THE INDIAN GOVERNMENT \$465 MILLION TO SETTLE ALL CLAIMS AND CRIMINAL MATTERS**
- ▶ **INDIAN GOVERNMENT STILL HOLDS MOST OF THAT MONEY**
 - **SOME VICTIMS HAVE RECEIVED \$300**

ENVIRONMENTAL CONDITIONS

- ▶ **SITE IS ABANDONED**
- ▶ **NO CLEANUP HAS OCCURRED**
 - ▶ **LITIGATION ONGOING**
- ▶ **SOIL CONTAMINATION**
- ▶ **GROUNDWATER CONTAMINATION**
- ▶ **DISPOSAL LAGOONS – HARDENED TOXIC
SLUDGE**

Lack of Emergency Preparedness

- Absence of proper warning systems.
- Lack of awareness generation in the neighborhood.
- No de-communication station.
- Limited MIC.
- The "scenario probably never



EPCRA WAS ADOPTED 2 YEARS LATER

- ▶ **BUT NOT UNTIL A SIMILAR EVENT IN WV**
- ▶ **UNIQUE - NOT COMMAND AND CONTROL**
- ▶ **INTENDED TO EMPOWER COMMUNITIES TO BE AWARE AND PREPARE**
- ▶ **NO TOOLS FOR ACCIDENT PREVENTION**
- ▶ **NO TOOLS TO REDUCE RISKS**
- ▶ **NO MONEY**

EPCRA - THREE DISTINCT STATUTES

- **THE POWER TO OBTAIN INFORMATION IS HELD BY LEPCs/TEPCs**
- **SUBTITLE A**
 - **EMERGENCY PLANNING & REPORTING §303-304**
- **SUBTITLE B**
 - **COMMUNITY RIGHT-TO-KNOW §311-312**
 - **TOXIC RELEASE INVENTORY §313**

FAST FORWARD TO 2016

- **HAS MUCH CHANGED?**
- **ARE COMMUNITIES AWARE AND PREPARED?**
- **HOW DO WE KNOW IF WE ARE DOING A GOOD JOB?**
- **STILL EVALUATED IN 20/20 HINDSIGHT**

CSB WEST TX REPORT – JAN. 26, 2016

■ Emergency Response Findings

- The WVFD did not conduct pre-incident planning. The firefighters did not have sufficient information
- Federal and Texas hazmat training placed little emphasis on emergency response to storage sites
- Grants used more for resources rather than for training

■ Emergency Planning Findings

- Despite documentation in a Tier II report, the WVFD did not conduct drills and exercises at the WFC facility
- Criticize zoning & land use decisions
- Community preparedness not emphasized

LET'S

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- PUBLIC



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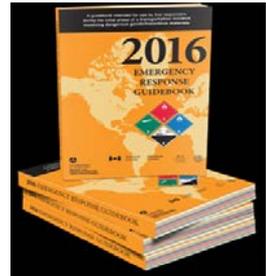


EXPECTATIONS

- **KNOWING THE PHONE NUMBER FOR “911” IS NOT A PREPAREDNESS PLAN – YET THAT IS WHAT WE ALLOW THE PUBLIC AND BUSINESS TO BELIEVE**

THE PREPAREDNESS SPACE IS LOTS MORE COMPLEX

- **EPCRA – Emergency Planning & Community Right to Know**
- **HAZMAT Transportation – Placards/Routes/ERG**
- **CERCLA – Comprehensive Environmental Response, Compensation and Liability Act**
- **CAA 112r – Clean Air Act’s Risk Management Planning (RMP)**
- **CFATS – Chemical Facility Security**
- **INTERNATIONAL PROGRAMS – APELL & OECD SPI**



HOW WILL YOU BE EVALUATED?

- **TEPCs/LEPCs ARE NOT RESPONDERS**
 - **RESPONSE IS NEVER PERFECT – DOES THAT MEAN THAT PLANS WERE FLAWED?**
- **PREPAREDNESS IS MORE THAN RESPONSE – BUT WHAT DOES THAT MEAN?**
 - **HOW MANY ACCIDENTS HAVE YOU PREVENTED?**
- **EXPECTATIONS & AWARENESS IN 20/20 HINDSIGHT**

HOW DO YOU KNOW IF YOU ARE DOING A GOOD JOB?

- **YOU MUST HAVE A “VISION OF SUCCESS”**
- **PROJECTS YOU CHOSE TO RUN AND FUND MUST ADVANCE THE VISION**
- **PROJECTS SHOULD NOT BE STARTED UNTIL YOU UNDERSTAND HOW YOU WILL MEASURE PROGRESS**
 - **WHAT IS A MEANINGFUL METRIC?**

THE PROCESS

- **Work to identify gaps in current preparedness**
 - **Match risks and capabilities – (public and private).**
- **“Vision of Success” is the community’s ideal level of preparedness**
- **Create strategic plan to prioritize & close gaps.**
- **Progress is demonstrated by measurable results showing that projects are closing gaps in a meaningful fashion.**

USING THE “VISION OF SUCCESS”

- **THE “VISION OF SUCCESS” IS ASPIRATIONAL**
 - Not a statement of current reality or focused on identified gaps.
 - Outcomes are achieved by shared prioritization.
- **CHARACTERISTICS OF THE “VISION OF SUCCESS”**
 - Honor local conditions
 - Requires that whole community participates
- **DEMONSTRATE THAT PROGRESS IS BEING MADE**
 - Don't guess that an activity is useful.
 - Don't assume that simple metrics are useful.
 - Example - Counting how many were trained is pointless.
 - Why were they trained?

THE PUBLIC HAS A “TOO HARD” BOX

- **PRAGMATIC VIEW OF PREPAREDNESS**
- **ORDINARY SKILLS CAN BE APPLIED TO EXTRAORDINARY SITUATIONS**
 - **YOU DON'T NEED EXPENSIVE STUFF**
 - **YOU DON'T NEED HOURS AND HOURS OF TRAINING**
 - **YOU NEED PLANNING AND FORESIGHT**
 - **THINK OUT SCENARIOS IN ADVANCE**
 - **WORST CASE AND OTHERS**
- **THE MESSAGE MUST BE THAT YOU ARE RESPONSIBLE FOR YOUR OWN PREPAREDNESS**

IMPORTANT IMPLICATIONS

- **The community has a stake in facility and transportation accident prevention efforts**
 - They get to review, comment and expect improvement
 - Facilities have a duty to prevent off-site consequences
- **The community has a stake in agency plans and priorities**
 - They get to review, comment and expect to be able to challenge assumptions and priorities
- **Community members get to participate in the strategic plan to fill the gaps between risks and capabilities**
 - Everyone has to “own” the value judgments involved

WHAT GETS IN THE WAY?

- **THE PROBLEM WITH 20/20 HINDSIGHT**
- **LEGAL DUTIES AND LIABILITIES**
- **FAILURE TO HAVE THE STRATEGIC PLAN AS A ROADMAP**
- **FORGETTING OUR CUSTOMER**
 - **HINT – IT'S NOT THE FEDERAL AGENCIES**

EDITORIAL ABOUT WEST TX

“Local officials cannot adequately prepare ... without conducting regular worst-case assessments and practicing

When officials don't involve residents in the planning, the public's exposure to death, injury and severe property loss grows exponentially.

It's time for ... communities to reassess their vulnerabilities and initiate full public discussions Federal law already requires it, but a lot of communities don't take these procedures seriously.”

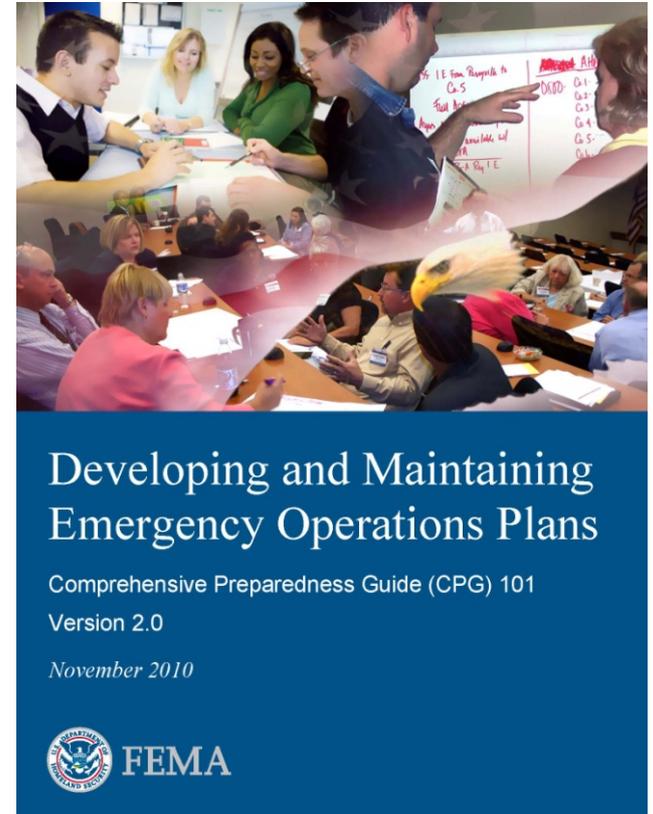
“LEPCs are one program correctly designed to save our lives.”

FEMA GUIDANCE – CPG 101

“When threatened by ... emergencies or disasters, people expect elected or appointed leaders to take immediate action...

They expect the government to marshal its resources... and solicit assistance from outside the jurisdiction if necessary.

The elected leaders in each jurisdiction are legally responsible for ensuring that ... actions are taken to protect people and property...”



INTEGRATED PLANNING

- CPG 101

- “Each jurisdiction ... should develop plans that define the scope of necessary activities for preparedness, emergency management, and incident response for that jurisdiction.”
- “... jurisdictions should also develop scenario-specific plans or annexes derived from their threat assessment.”
- “These plans should describe organizational structures, roles and responsibilities, policies, and protocols ... should be flexible ... should be comprehensive enough to meet the wide variety of public needs that may arise.”
- **“IDENTIFY AND FILL CAPABILITY GAPS”**



TRIBES ALSO HAVE THIS LEGAL DUTY

- **As A Legal/Practical Proposition Tribes And Other Governments Have The Same Duties**
- **“As sovereign governments, tribes have the same responsibilities for the public safety and security of their communities as do state and local governments.”**
 - **National Congress of American Indians**

WHAT IS THE TEPC/LEPC ROLE?

- **WHAT IS UNIQUE ABOUT TEPCS/LEPCS?**
- **WHAT ARE THE LEGAL AUTHORITIES?**
- **COMMUNITY-BASED ASSESSMENT OF RISKS AND CAPABILITIES**
- **FORUM FOR DISCUSSION AND COMMUNICATION**
- **DO NOT HAVE TO LEAD BUT MUST PARTICIPATE**

GOLDEN RULES

- **Know the hazards in your community.**
 - Where there are hazardous substances?
 - What are the natural hazards?
 - What are the capabilities?
 - What are the public capabilities?
- **Educate public and business**
 - What can happen to you?
 - What are their obligations?
- **Create participation and cooperation**
 - public, authorities & industry
 - have high expectations
- **Have a Vision of Success**

A JOB FOR EVERYONE

- **INITIALLY IT IS AN EDUCATION PROBLEM**
 - **WHAT ARE THE RISKS IN THE COMMUNITY?**
 - **“HAZARD” vs “RISK”**
 - **WHAT ARE THE CAPABILITIES IN THE COMMUNITY TO RESPOND TO THESE RISKS?**
- **REALISTIC & HONEST APPRAISAL**
 - **INSTITUTIONAL AND HUMAN BIAS TO OVERESTIMATE CAPABILITIES AND TO UNDERESTIMATE RISK**
- **NEEDS AN HONEST ANSWER TO THE QUESTION OF “WHAT CAN’T WE HANDLE?”**

LESSONS

- **LEPCs MUST BE FOCUSED**
 - **LOCAL NEEDS AND CONDITIONS**
 - **RELEVANT TO THE COMMUNITY**
- **DO NOT FORGET “ROUTINE” RISKS**
 - **CHASE THE RIGHT KIND OF MONEY**
- **EXPAND YOUR HORIZONS**
 - **PREPAREDNESS IMPROVEMENTS CAN BE MADE WITH SCHOOL KIDS, GENERAL BUSINESS COMMUNITY**



QUESTIONS

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- **(303) 572-0050 or (800) 818-0050**
- **[http://apell.eecentre.org/Modules/GroupDetails/Upload File/APELLHandbook\(2nd_ed.\)-Compressed.pdf](http://apell.eecentre.org/Modules/GroupDetails/UploadFile/APELLHandbook(2nd_ed.)-Compressed.pdf)**