



Exploring Man-made Hazards in our Communities:

A Toxic Tour of Kansas

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The Players

- An interdisciplinary collaboration for an experiential learning module to provide a field trip/direct experience for students enrolling in:
 - AGCOM 420 – Crisis Communications
 - AGCOM/MC 712 – Environmental Communication
 - MC 740 – Risk Communication

The Purpose

- To expose students to the concepts and best practices of risk, crisis, and environmental communications.
- Objectives
 - To expose students to the affects of man-made disaster on marginalized and socially vulnerable populations
 - To engage the students in a critical discussion of the power of media when providing a voice for those disenfranchised groups

The Point

“Risks are imposed unequally in society, and frequently those most exposed are least able to cope with risk.”

- Tierney (1999)

Safe vs. Unsafe

- Socioeconomic status affects one's ability to absorb losses or be protected by social safety nets such as insurance coverage;
- Women are at greater risk than men due to lower wages or child/family care responsibilities leading to the "feminization of poverty;"
- Race can impose cultural or language barriers resulting in less access to funding for disaster recovery or limited access to low-risk neighborhoods.

- Peacock, Morrow, and Gladwin (1997 & 2000)

The Plan

- Considered all Kansas EPA Superfund sites
- Superfund:
 - Name of the fund established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)
 - Name given to the environmental program established to address abandoned hazardous waste sites.



We chose Galena, KS

Brief History

- 1877 , Spring – Lead and zinc ore was found
- Empire City and Galena (named for the bluish-grey lead) were formed
- 1877, Summer – population of 10,000
- Late 1890s – 265 producing mines
- 1898 – Population of 30,000
- 1904 – Over 30 mining companies

Brief History

- 1910 – Empire City annexed into Galena
- 1926 – Route 66 comes through Galena
- 1930s – Mines diminished
- 1970s – Deposits depleted
- 1990s – EPA remediation
- 2007, July – Population 3,163
- 3 – New construction single-family building permits in 2007

The Threats

- Acidic waters in mine shafts throughout the site, chat piles, tailings, impoundments, surface waters in the mine pits, and streams draining the site contain significant concentrations of lead, zinc, and cadmium.
- Surface soils are contaminated with mining, milling, and smelting wastes exclusive of areas where remediation is now complete.
- Risks to public health include incidentally ingesting soil, mine wastes, and contaminated dust, or ingesting contaminated surface waters, foodstuffs, or groundwater.

The Green Parrot

- Est. 1942, owner and 80 y.o. parent lived on premises; building 114 y.o.
- July 31, 2006 (~7 a.m.) – 62 ft. deep x 65 ft. across sinkhole
- Subsidence: motion of a surface as it shifts downward relative to a fixed survey point, a datum.
- Over 800 mine shafts in Galena

Subsidence



Green Parrot

Notice the gas, water, sewer lines are exposed and under severe stress.



Green Parrot Aftermath



Final Result

Owner Mickey Morang giving a tour of his former home and business; this was the first time he had come back to the site.



Other Examples



Smelting Plant





Hell's Half-Acre

EPA remediation area; over 3 mil. cubic yards of soil.

Summary

- Sustainability Tenet
 - Humanity and its social orders exist within and depend upon ecological relationships.
 - Prime example of lack of forethought
 - Galena residents are fighting ghosts of the past
 - Residents strangled by lack of options

Any questions?

Thank You