

The Business of Brownfields

Developing Community Assets
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Risk Assessment and Risk Communication

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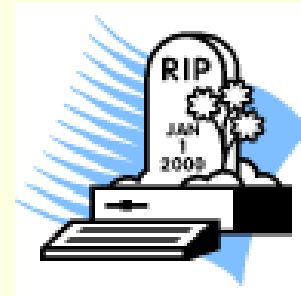
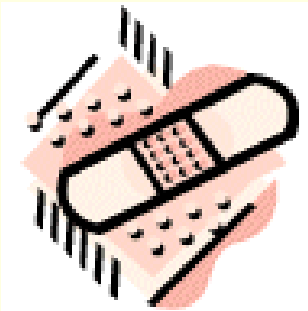
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What is RISK?

- **Risk** = the **probability** of injury, disease, or death under specific circumstances






Public's Concern

- What if I am exposed? Will it hurt me or my children?



Assessing risk

- People accept certain risks because they enjoy the **benefit** they receive from the behavior or activity
 - Some people voluntarily seek out extraordinarily high levels of risk, engaging in:
 - ❖ Skydiving 
 - ❖ bungee jumping 
 - ❖ rock and ice climbing 
 - ❖ other extreme sports

Voluntary risks are different than involuntary risks



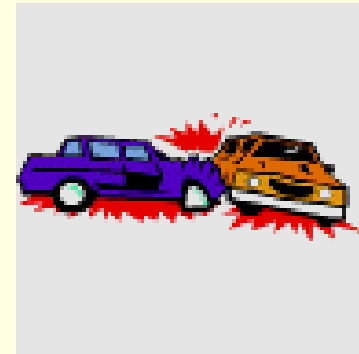
Risk of death of everyday life in the U.S. annually

- The Flu: 1/5,000
- Disease (leukemia): 1/12,500
- Hit by an automobile: 1/20,000
- Drowning in a flood: 1/455,000
- Death in an earthquake: 1/588,000
- Nuclear Power Plant: 1/10,000,000
- Meteorite: 1/100,000,000,000

*Adapted from Dinman, B.D. "The Reality and Acceptance of Risk" JAMA 244(11): 1126-1128, 1980


Risk of death from automobile accidents in the U.S.

- Population Based Annual Risk:
46,000 deaths/yr (Actual)
- Individual Based Annual Risk
46,000 deaths/yr
- Individual Lifetime Risk
About 1/100



RISK

➤ Risk Assessment: A 4 Step Process

- Hazard identification : what is present?
- Dose-Response Assessment: toxicity' 
- Exposure assessment: How much and where?
- Risk Characterization: how large is the risk under specific exposure scenarios

➤ Human Health and Ecological Risk

When assessments have been completed...

➤ Answer the question:

- ✓ What risks have been identified and how do we communicate those risks?



Keys to the Communication of Risk

- ✓ Involve the public as a partner early in the process
- ✓ Listen and be responsive to public's feelings
- ✓ Be honest, frank, kind and respectful
- ✓ Coordinate and collaborate with other credible sources
- ✓ Speak clearly with compassion and avoid technical/scientific terminology

Keys to the Communication of Risk

- Involve the public as a partner early in the process
 - Involve all parties that have expressed an issue or have an interest or stake in the issue



Keys to the Communication of Risk

- Listen and be responsive to public's feelings
 - ✓ Do not make assumptions
 - ✓ Let all stakeholders be heard
 - ✓ Identify with your audience
 - ✓ Recognize their emotions



Keys to Communication of Risk

- Work to build trust



Keys to the Communication of Risk

- Coordinate and collaborate with other credible sources
 - Take time to coordinate with other groups
 - Work hard to “build bridges”
 - Issue communications jointly with other groups



Keys to the Communication of Risk

- Speak clearly with compassion and avoid technical/scientific terminology
 - Technical language and jargon can be a barrier to successful communication
 - Put risk in perspective
 - Acknowledge and respond to emotions expressed by public
 - Communicate on a personal level

Communication of Risk

- Hierarchy of Effective Communication
 - Face to face
 - Small group discussion
 - Telephone
 - Personal note
 - Brochure
 - Media based article
 - Advertising



Communication of Risk

- Communication tools should include practical strategies and implementation
- Include a mechanism for receipt of continuous feedback
- Close the loop and maintain accessibility



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