



# Bringing Science and Planning Together



## A Case Study on Protecting Human Health, Safety, and Welfare from Vapor Intrusion

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### Study Rationale

- 374,000 potential sources of vapor intrusion litter our American communities<sup>1</sup>
- Planners balance the demand for development with the need for protecting human health, safety, and welfare from vapor intrusion
- Land use solutions must be supported by the understanding of this environmental health hazard

### Problem Statement

- How are knowledge and information about vapor intrusion communicated to, understood by, and used by local planners during the planning process when redeveloping land with historical and existing hazards?

### Background

- A city in Los Angeles County, Calif. is redeveloping one of the largest hazardous waste landfills in the country
- Environmental monitoring, land use restrictions, and engineering controls are imposed
- This research is investigating how planners and the planning process address vapor intrusion concerns and impositions

### Vapor Intrusion

- Vapor intrusion is the movement of volatile chemicals in the subsurface that eventually contaminate the indoor air in overlaying buildings that people breathe.
- For vapor intrusion to occur there must be a source, migration of chemicals through the environment, and exposure.

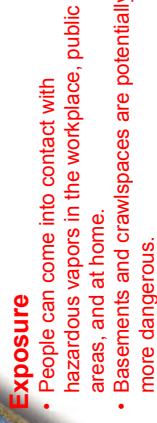
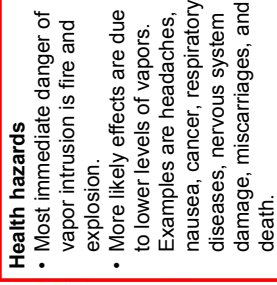
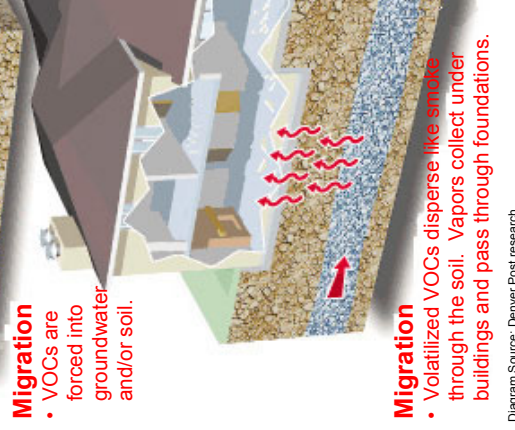
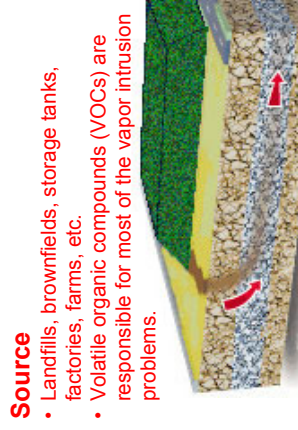


Diagram Source: Denver Post research  
Diagram does not actually represent case site

### Lessons Learned

- Start with creating a clear and realistic view of the facility's form and function
- Assessing environmental health hazards is extremely difficult
- Understand the feasibility and limits of hazard assessments
- Establish a clear participatory strategy early-on
- Request lead regulatory agency to form a multi-agency committee to coordinate regulatory activities
- Communication of hazards starts before redevelopment efforts
- Legitimacy is crucial to maintaining local control
- Uses must be compatible with assessment
- Collaborate with regulatory agencies for creative approaches to land use restrictions
- Be transparent with public

### Conclusion

- Planners are making better-informed land use decisions by justifying plans with the best available information on environmental health hazards
- Other communities can learn from this case

### Acknowledgements

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- The City of West Covina, Calif.
- The County of Los Angeles Public Library, West Covina Branch

### References

- 1 USEPA. Subsurface Vapor Intrusion Guidance. Washington D.C.: USEPA, 2002. Available from <http://www.epa.gov/epaoswer/hazwaste/ca/eis/vapor.htm>.

## From Community Hazard to Community Asset

### Chronology of Site and Redevelopment Project

- 1963 • Landfill starts managing non-hazardous waste in a residentially zoned, rural area
- 1971 • Landfill increases to present size of 583 acres
- 1972 • 140-acre unlined hazardous waste landfill starts operations
- 1976 • Homes and stores are built adjacent to site
- 1984 • Precautionary evacuation of 19 homes due to landfill gas detected in yards
  - Hazardous waste, excluding asbestos, is no longer accepted
- 1987 • 100-acre municipal waste landfill opens and hazardous waste landfill starts closure
- 1996 • Site stops receiving waste and starts closure
- 2000 • Landfill owner gets approval for golf course and commercial center development project
- 2003 • Landfill owner unable to implement plans
  - City enters into a covenant not to sue with Cal/EPA and EPA, and purchases ~230 acres
  - City takes over project and adds Sportsplex and nature preserve



Proposed site plan provided by Rossett Architects, 2001



Source: No Walnut Hill Development  
<http://www.groceries.com/wahit>