

Appraisal of Contaminated Property

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Appraisal of Contaminated Property *very very cheaply*

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Appraisal of Contaminated Property

- Similarity to Condemnation
- NOI and Cap Rate
- Stigma
- Survey Results
- Approaches to Value
- Residential Appraisal Impacts
- Advisory Opinion AO9

Condemnation versus Contamination

Comdemnation

<i>Before Value</i>	\$XXX
<i>Value Taken</i>	-XX
<i>Damage</i>	<u>-XX</u>
<i>After Value</i>	\$XXX

Impairment to NOI

	<u>Unimpaired</u>	<u>Change</u>	<u>Impaired</u>
Gross Rent	\$500,000	-20%	400,000
Occupancy	90%	-20%	70%
E.G.I.	450,000		280,000
Expense Ratio	20%	+10%	30%
N.O.I.	360,000		196,000

Unimpaired Value

$$V_u = \frac{NOI_u}{R_u} = \frac{360,000}{.12} = \$3,000,000$$

Impaired Value

$$V_i = \frac{NOI_i}{R_i} = \frac{196,000}{.16} = \$1,225,000$$

Loss in Value

$$\begin{aligned}V_L &= V_u - V_i \\ &= \$3,000,000 - \$1,225,000 \\ &= \$1,775,000\end{aligned}$$

Loss Due to Income

$$\begin{aligned} L_{income} &= \frac{NOI_u - NOI_i}{R_u} \\ &= \frac{360,000 - 196,000}{.12} \\ &= \$1,366,667 \end{aligned}$$

Loss Due to Stigma

$$L_{stigma} = L_{total} - L_{income}$$

$$= \$1,775,000 - \$1,366,667$$

$$= \$408,333$$

Stigma Criteria

Disruption

Responsibility

Concealability

Prognosis

Media Attention

Degree of Peril

Aesthetic Effect

Level of Fear

Michael R. Edelstein, Contaminated Communities: The Social and Psychological Impacts of Residential Toxic Exposure (1988)

Definition of Market Value

“The most probably price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus.”

-- USPAP, 1998, pg 163

Impacts of Stigma

- Discount from “Unimpaired” Market Value
- Indemnification
- Substitution

Survey Results

- 67% of homeowners unwilling to purchase in contaminated neighborhood
- 75% site health reasons
- 50% also site financial liability concerns

Survey Results

- 63% of “NO” would not buy regardless of incentives
- 37% would buy if cleaned up
- 25% would buy if financially indemnified

Survey Results

- 64% of “YES” expect financial concession
- Mean discount: 24.3%
- 10% wanted discount of 50+%

Survey Results

- 10% would accept 10% cap rate
- 18% wanted 11% cap rate
- 5% wanted 11.5% cap rate
- 18% wanted 12.5% cap rate
- 8% wanted 14.5% cap rate
- 8% wanted 15% cap rate

Survey Results

- 20% stated no return was high enough
- Mean cap rate reported: 15.8%

Approaches to Value

TRADITIONAL

- Cost
- Sales Comparison (Market)
- Income

Approaches to Value

COST APPROACH -- RESIDENTIAL

- Cost to cure
- Economic (external) depreciation

Approaches to Value

SALES COMPARISON APPROACH -- RESIDENTIAL

- Physical Adjustments
- Conditions of Sale Adjustments

Approaches to Value

INCOME APPROACH -- RESIDENTIAL

- Market Rent?
- G.R.M.?

Approaches to Value

OTHER APPROACHES

- Case Studies
- Mass Appraisal
- Hedonic Regression
- Survey (CV, CJ)

Advisory Opinion #9,

“An appraiser is a trained and experienced observer of real estate, but recognizing, detecting or measuring contamination is often beyond the scope of the appraiser’s expertise.”

-- USPAP, 1998, page 113

Further Reading

- USPAP 1999
- “An Introduction to Valuation of Contaminated Property” by James Samsal, Assessment Journal, March/April 1994
- “Risk Factors in the Appraisal of Contaminated Property” by Chalmers & Jackson, Appraisal Journal, January, 1996
- “Environment and the Appraiser” by Richard Roddewig, Appraisal Journal, January, 1999
- “Stigma and Value” by Bill Mundy, Appraisal Journal, January, 1992
- “Appraisal and EIFS” by Kilpatrick, Brown, and Rogers, Appraisal Journal, January, 1999
- “Ten Standard Classifications of Detrimental Conditions” by Randall Bell, Right of Way, July/August, 1996
- “The Real Estate Expert Witness” by McLean, Kilpatrick, and Mundy, Real Estate Issues, Winter, 1999