

ENVIRONMENT AND THE APPRAISER

Temporary Stigma: Lessons from the *Exxon Valdez* Litigation

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Few cases in recent years have been as big, at least in terms of media attention, as the litigation that followed in the wake of the *Exxon Valdez* oil spill in 1989. The approximately 10.8 million gallons of oil released in the spill moved west and south through Prince William Sound and the Gulf of Alaska, oiling in varying degrees about 1,300 miles of Alaska coastline. Intensive cleanup efforts were undertaken by Exxon and others under the supervision of the U.S. Coast Guard during the next four years.

A number of lawsuits were filed in state and federal courts in the wake of the *Exxon Valdez* spill. While many of the most publicized cases did not directly involve real estate valuation issues, a significant, but not very widely publicized, lawsuit in the Alaska state courts did involve claims made by private owners of oiled properties who sought damages for the impact of the spill on the value of their property.¹

The *Exxon Valdez* litigation was filed at a time when the appraisal profession was finally becoming comfortable with assignments involving valuation of contaminated properties. However, the *Exxon Valdez* litigation raised some cutting-edge issues concerning environmental stigma, temporary impacts of contamination on property markets and values, and the appropriate measures of temporary real estate impacts on properties

in remote or limited markets like Prince William Sound.

STIGMA: TEMPORARY VS. PERMANENT IMPACTS

To understand the context of the real estate aspects of the *Exxon Valdez* litigation, an appraiser must understand the recent rapid evolution of appraisal practice techniques involving the valuation of contaminated property. Over the past two decades, appraisers have learned how to evaluate the impact of a wide variety of environmental risks on property values and real estate markets. Thanks in part to the Appraisal Institute's significant role in providing guidance to the profession on appropriate valuation techniques,² appraisers have become more skilled in determining the impact of contamination and other forms of environmental risk on real estate values and real estate markets. For an appraiser with little if any prior experience in this practice area, however, or who handles only an occasional assignment involving environmental risk and stigma, the appraisal issues can still be daunting, especially when the stigma caused by the contamination or environmental risk is temporary rather than permanent. In fact, the whole issue of temporary versus permanent impacts on value is becoming increasingly

1. *In re: The Exxon Valdez*, Superior Court for the State of Alaska, Third Judicial Circuit, 3AN-89-2533. Another piece of the *Exxon Valdez* litigation dealt with damages to state and federal lands.

2. Richard Roddewig, "Stigma, Environmental Risk and Property Value: 10 Critical Inquiries," *The Appraisal Journal* (October 1996): 375-387.

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important and sometimes requires appraisers to step outside the neatly defined borders of the three traditional approaches to value in order to handle it.

The appraisal profession has now come to recognize that environmental stigma can indeed be temporary rather than permanent.³ To understand how some types of environmental stigma can increase, decrease, and even disappear with time, consider the history of the real estate market's response to asbestos. In the 1970s, when health concerns about asbestos first surfaced, some types of commercial real estate were completely stigmatized—the market for them evaporated almost overnight. However, as scientists began to understand the health risks more clearly, technical specialists began to develop quantifiable and cost-effective remediation techniques and monitoring systems to assure existing tenants that asbestos removal procedures in one part of a building were not contaminating other areas. In addition, lawmakers and regulators began to clarify the legal responsibilities, the marketplace (including lenders) became more knowledgeable and, therefore, more comfortable in dealing with the risks associated with owning property containing asbestos. The result has been a gradual lessening of the stigma (over and above the costs associated with remediation). In fact, today many types of properties containing asbestos may not even be stigmatized and their values may be unaffected by the presence of asbestos.

POINTS OF AGREEMENT AND DISAGREEMENT AMONG EXXON VALDEZ REAL ESTATE EXPERTS

Now that the real estate litigation resulting from the 1989 grounding of the *Exxon Valdez* oil tanker in Prince William Sound has essentially been completed, the appraisal profession can gain some important insights into alternative methodologies for measuring damages caused by “temporary” contamination events. The principal plaintiffs in the real estate litigation were a group of property owners including Native American corporations, native villages, and the Kodiak Island Borough. The principal defendant was

Exxon. Both sides retained real estate and other experts to analyze the impact of the spill on real estate markets and measure the damages. While experts on both sides had many disagreements about the impact of the oil spill on real estate markets and even about valuation and market impact methodologies and concepts, there were also some core methodological issues on which they agreed.

- Both sides agreed that the impact of the oil spill on real estate was “temporary.” They disagreed on the length of the impact and how to determine its length, however.
- The principal experts on both sides considered it appropriate to classify the affected lands by use and determine damages on a use-by-use basis. They disagreed on the characterization of some of the use categories, amount of acreage in each category, comparables, highest and best use of specific parcels, and, in some categories, land value.
- Both sides attempted to quantify the damages to real estate by determining an imputed economic loss. They disagreed on the characterization of this loss as lost rent or payment for a license to use the land during the oiling and subsequent cleanup.
- Experts on both sides agreed that the economic losses over time could properly be discounted to a present value. They disagreed on the length of the discount period, the appropriate discount rate, and whether the courts or the appraisers should select the appropriate discount rate.

There were other major points of disagreement on methodological and even definitional issues. The case involved such fundamental questions as the meaning of “highest and best use” for property located in a remote and limited real estate market such as that in Prince William Sound and whether “market value” was synonymous with “public interest value” for some of the land affected by the spill. Some of these fundamental disagreements worked their way into *Appraisal Journal* articles published during the litigation.⁴

3. See, for example, the discussion in Chapter 6 of the materials for the Appraisal Institute seminar, *Environmental Risk and the Real Estate Appraisal Process*.

4. Compare Victoria Adams and Bill Mundy, “The Valuation of High-Amenity Natural Land,” *The Appraisal Journal* (January 1991): 48 (This paper was written by two of the experts for the property owners.) to Richard J. Roddewig and Gary R. Papke, “Market Value and Public Value: An Exploratory Essay,” *The Appraisal Journal* (January 1996): 52 (This paper was written by experts for Exxon).

PROPERTY OWNERS' METHODOLOGY AND CONCLUSIONS

The principal real estate expert for most of the property owners primarily relied on a comparison of the discounted present value from a 30-year stream of imputed economic rent "before and after" considering the impact of the *Exxon Valdez* oil spill. The difference in the two discounted present values equated to the damages to market value of the oiled properties. Key assumptions and considerations in the discounting model used by the property owners' expert included the following:

- Entire ownership parcels, not just shoreline-related areas, were affected by the spill.
- The duration of the real estate impact is directly related to the physical persistence of the oil on the affected properties as determined by a scientific consultant on which the real estate expert relied.
- The physical persistence of the oil (and, therefore, the duration of the real estate impact) varied from parcel to parcel, depending on the character of the shoreline, the severity of the initial oiling (i.e., light, moderate, or heavy), and the degree and effectiveness of the cleanup. On some heavily oiled shoreline segments, the physical persistence and, therefore, the market impact could last as long as 24 years.
- The annual loss in dollars to the land can be expressed in terms of a lost economic rent even for non-income producing properties.
- Parcels that had only a portion of the length of their shoreline oiled, say, for example, 5,000 feet of a 10,000-foot shoreline, or 50%, were assumed to have lost that same percentage (50%) of their economic rent during the entire period of physical persistence.
- The risks associated with receiving the economic rent on oiled properties was greater than on unoiled properties; therefore, the discount rate should be 400 basis points higher than the appropriate rate for unoiled properties not affected by the spill during the period of physical persistence.
- The adverse impact of the spill on economic rent lasts an average of two years

longer than the physical persistence of the oil due to "remaining uncertainty," but the difference in the discount rate during those additional two years is only 200 rather than 400 basis points.

- Every oiled parcel suffered a complete market stigma (and, therefore, total loss of imputed economic rent) for one to three years immediately following the oil spill and during the subsequent cleanup.

EXXON'S METHODOLOGY AND CONCLUSIONS

The team of experts for Exxon approached the problem in a different way. Both of the firms retained by Exxon actually researched the marketplace to determine the duration of oil spill impacts. One firm compiled information on previous oil spills in North America and elsewhere and developed a methodology for selecting case studies most appropriate to analyze to understand the impact of spills on real estate markets. From an initial list of 43 oil spills, about 13 were selected for further research and analysis and detailed case studies of four spills before and after the *Exxon Valdez* spill were conducted. Two of these spills occurred in Washington state, one in California, and one in Massachusetts. The purpose of these case studies was to gain insights into the real estate marketplace's typical reaction to an oil spill. The case studies selected for detailed analysis involved locations in which an active real estate market existed at the time of the spill. The lessons learned from these active markets could then be applied to the relatively limited and inactive market in Prince William Sound and southcentral Alaska. The case studies resulted in a significant body of market data that answered such questions as the following:

- Does a marketplace indeed shut down after a major oil spill?
- If there is a shutdown, how long does it last?
- Is there any relationship between cleanup efforts and the length of any marketplace impacts from the spill?
- Are only directly oiled properties affected or do market impacts extend to non-oiled properties in proximity to oiled shorelines?
- If non-oiled properties are affected, how far up or down the coast or inland from

the spill site does that marketplace impact extend?

- If sales are made at the time the marketplace experiences a spill and begins cleanup, are the prices affected by the spill?

From the case studies, Exxon's experts reached a number of conclusions, including the following:

- There is no automatic direct correlation between physical persistence of oil and real estate impacts.
- If there is any real estate impact following oil spills, it affects directly oiled beachfront property only where use of the property has been impaired and does not extend inland or have a marketwide impact.
- The length and intensity of the cleanup is a significant factor in determining the length of any potential real estate market impact.
- Although there is some evidence of oil spill impact on market values in some of the case studies, "(M)ost of the case study analysis supports a conclusion that oil spills do not adversely affect property values."⁵

Those Exxon experts simultaneously researched and tracked what was happening in the southcentral Alaska land market in the wake of the *Exxon Valdez* spill. They analyzed the numbers of real estate transactions, recordings of warranty deeds and mortgages, changes in local assessed values and State of Alaska estimates of "full value" of property, and value of recorded mortgages. Comparisons were made between oiled and non-oiled property both before and after the spill to determine if the Alaska marketplace itself was showing any impact from the spill. The conclusions of the real estate analysts was that the Alaska marketplace showed neither a temporary nor long-term disruption from the *Exxon Valdez* spill, and most of the indicators showed that market activity and property values actually improved within the portion of the state affected by the spill by comparison to non-oiled areas.

The case study and Alaska market research undertaken by that first group of Exxon real estate experts were used for two purposes in the litigation. First, they pro-

vided support to real estate damage calculations by Exxon's other real estate experts. Second, they formed the basis for critical analysis of the property owner's calculation of damages and correction of those damage claims, taking into account the results of the Alaska market research and oil spill case studies for determining such things as the length of stigma impact, amount of shoreline-related property affected by the spill, and discount rates.

An appraisal report was prepared by the second team of Exxon experts. Key considerations in this report included the following:

- Only shoreline-related areas were affected by the spill, not upland (e.g., cliff tops or mountaintops) or inland acreage more than one-half mile from shore.
- The duration of the economic impact is lessened by cleanup activities and is not automatically related to the duration of physical persistence of some oils on a property. The removal of oil and curing of visual oiling effects were more important to informed market participants than the physical persistence of scattered remnants of oil in isolated pockets.
- Not all oiled properties suffered economic impairment. A key consideration is whether the oiling interfered with a property's reasonable use.
- The degree of economic impairment is also a function of the highest and best use of the land prior to the spill. Much of the land had only limited use potential even before the spill.
- The annual loss in dollars can be expressed in terms of payment for a temporary nonexclusive real estate license to Exxon to enter and clean the shoreline.
- Licenses in Alaska are typically granted for shorter terms and at a lower annual rate as a percentage of value than are leases.
- Annual economic loss due to impairment of use decreased each year after the spill as a result of Exxon cleanup activities and natural cleansing by winter storms. For example, a heavily oiled property with a near-total impairment of use in 1989 immediately after the spill

5. "The Impact of the *Exxon Valdez* Oil Spill on Real Estate Markets," Clarion Associates, Inc., Chicago, May 28, 1993, 190.

may have improved to the point that, two years later, impairment was reduced to only 60% and three years later to only 2% in 1992, the last year of cleanup.

- Impairment of use for most parcels did not extend beyond the termination of cleanup activities in 1992, and for all parcels not beyond March 1993, four years after the spill.

DAMAGE ESTIMATES AND THE JURY'S DECISION

What were the damage calculations made by both sides and the jury? A variety of property owners filed a series of related cases. The largest damage claims were filed by a group of native corporations and villages that owned property in Prince William Sound and along the Gulf of Alaska. Although their initial property damage claims apparently totaled over \$600 million, by the time the actual trial began in July 1994, damage claims by those groups totaled about \$93.5 million. Exxon's appraisal expert estimated the total damage claim to be between \$2 million and \$5 million. Exxon's other real estate experts who investigated the marketplace in southcentral Alaska before and after the spill undertook case study analysis of other oil spills and then adjusted the property owner's damage calculations based on that research. These second experts concluded that when the property owners' methodology was properly adjusted for marketplace factors, the damages were about \$5.95 million. The jury concluded that the damages totaled about \$6.7 million for all plaintiffs combined, including the Kodiak Island property owners.

LESSONS OF THE EXXON VALDEZ LITIGATION

There are many lessons that are apparent now, and many more will become apparent as time passes. Among the more significant that can now be discerned are the following:

- The nature and purpose of the assignment determine the most appropriate valuation or evaluation technique. A technique perfectly appropriate for the

typical appraisal assignment involving uncontaminated residential or commercial property, such as the "before and after" approach, for example, may be inappropriate, and possibly even misleading, in some assignments involving contaminated property or properties affected by environmental stigma.⁶

- Appraisers are trained to deal with market value as of a specific date in time. However, values can change over time, and traditional techniques from typical appraisal assignments may have to be modified to fit the realities of the real estate assignment, especially when the goal is to arrive at an accurate estimate of damages to property during a specific time period.
- Appraisers must look to the marketplace for answers and analyze what the marketplace itself is actually saying. Scientific conclusions about persistence of contaminants do not necessarily correlate with the marketplace's conclusion about the duration of economic impact on real estate.
- Estimates of stigma damage can be significantly affected, and possibly overstated or understated, by critical assumptions made about the size of the parcel affected by the contamination situation.

Techniques and solutions developed in unusual appraisal assignments, such as the one faced by the real estate experts in the *Exxon Valdez* litigation, are important to the appraisal profession. They require appraisers to test the adequacy and practical limitations of traditional valuation and analytical tools, devise flexible new tools in the context of basic professional touchstones (such as the definitions of market value and highest and best use), and incorporate those new insights into their professional practice.

Many of the insights gleaned from the *Exxon Valdez* litigation are being incorporated into professional practice by those who have attended the Appraisal Institute's seminar *Environmental Risk and the Real Estate Appraisal Process*, which was prepared by some of the experts involved in that case. Many of the techniques used in the *Exxon*

6. "Stigma" is defined as "an adverse effect on the market's perception of the value of property containing an environmental risk even after cleanup costs have been expended or considered in estimating value." From the *Environmental Risk and the Real Estate Appraisal Process* seminar, 128.

Valdez litigation are discussed, including case studies, before and after approach, analysis of general market data, analysis of tax assessment data, surveys of market participants, hypotheticals, and analogies.⁷ I highly rec-

ommend this seminar, which offers considerable help to appraisers deciding on the right methodology for measuring temporary environmental stigma.

7. For another look at some of the issues that arose in the *Exxon Valdez* litigation over real estate impacts, see John Dorchester, Jr., "The Exxon Valdez Oil Spill: Property Damage Assessments," *The Valuer and Land Economist*, v. 34, no. 2 (May 1996): 96.