The Mediation of Variance Conflicts: An Empirical Evaluation

Joshua M. Duke and Ryan P. Jost
University of Delaware

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Food and Resource Economics
University of Delaware
205 Townsend Hall
Newark DE 19717-1303
302-831-1309
duke@udel.edu

Summary

Since 1982, the New Castle County Superior Court in Delaware has promoted mediation, which attempts to resolve filed conflicts prior to trial. This paper evaluates how spatial land-use conflicts channel through mediation and litigation. Data suggest that mediations fail because one of the key disputing parties does not play a direct role in mediation and litigation. The data then inform a predictive model of litigated outcomes in which disputants share in the responsibility for conflict. By alleviating some of the uncertainty of litigation and proposing win-win, mediated outcomes, the model may be used facilitate future mediations.

Key Words

Mediation, litigation, variance, land use, conflict resolution, zoning

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Since 1982, the New Castle County Superior Court in Delaware has promoted mediation prior to trial in filed conflicts. This program is highly regarded in the State, but—as is common with alternative dispute resolution—has not been systematically evaluated. This paper investigates how the Superior Court processes a small subset of its total case log: spatial land-use conflicts channeling from a municipal Board of Adjustment. In contrast to the success of Superior Court mediation of other private disputes, the data suggest that mediation does not succeed in these land-use conflicts. Moreover, the failure in mediation appears predetermined because one of the private disputing parties does not play a direct role in mediation and litigation. This paper uses data on litigated, spatial land-use conflicts to inform a predictive model to be used as a policy tool for facilitating future mediations. In the model of litigated outcomes, disputants share in the responsibility for conflict. The model offers disputants an expected outcome from litigation, which ought to act as a focal point in mediated bargaining and which ought to facilitate settlement by alleviating some of the uncertainty of the resolution process.

I. Evaluating Mediation

Although the main conclusion is unenthusiastic—mediation fails to resolve every one of the sampled land-use conflicts—the lesson ought not to be that mediation is unable to resolve these conflicts. A policy model suggests how the mediation program may be adjusted. First, however, the existing evaluative literature on environmental mediation is reviewed. To date, theoretical

models, case studies, and one quantitative model have evaluated mediation and have mostly found it to be a success.

Most environmental disputes either are resolved through litigation, legislative bodies, or never enter formal resolution because one of the disputing parties cannot meet the costs of resolution. Yet, the numbers of disputes that are formally litigated worry policymakers, academics, and the public at-large. Shavell (1997) argues that—beyond the private costs facing disputants—the social costs of running the legal system alone raise the question of whether the amount of litigation is appropriate. This concern manifests in a general social movement to redirect many disputes away from litigation, to limit damage awards, and encourage alternative dispute resolution. At the same time, environmental disputes are increasing in prevalence and complication, which highlights need for procedures to settle these conflicts quickly, efficiently, and less expensively. Mediation seems well positioned to resolve many of these conflicts. However, empirical analyses comparing mediation and litigation are lacking.

Almost all of the existing evaluative literature relies on case studies and theoretical results. The principal theoretical arguments center on (1) the effectiveness of mediation in terms of lower costs to disputants and society; (2) the speed of resolution; (3) the disputants' sense of satisfaction from their active role in resolution; and (4) its focus on the real issues at stake rather than those that carry weight in court. Anecdotal evidence motivates the three main comparative studies of environmental mediation (Susskind 1981; Bingham 1986; O'Leary 1995). Yet, only one study comprehensively and empirically evaluates the claims made in the environmental mediation literature (Sipe 1998). Sipe (1998) compares litigated outcomes to a control group of mediated cases in Florida and finds that mediation results in higher rates of settlement and compliance.

II. Spatial Land-Use Conflict Data

Trial court litigation of land-use conflicts is processed through two distinct channels in Delaware. In general, if one disputant seeks to enjoin another, the conflict will channel to a County Court of Chancery. Suits for damages against private parties, on the other hand, mainly channel to a County Superior Court. The Superior Court also reviews cases classified as "administrative appeals of certiorari," which occur when a private party appeals the decision of a municipal quasi-judicial body.[1] This paper examines a population of thirty-seven conflicts filed in the New Castle County Superior Court.[2]

The population of conflicts was determined by searching for "zoning" and "nuisance" in *Delawnet*[3], which is a full-text database of written decisions in the State courts. These zoning conflicts were further restricted by location (New Castle County's Superior Court), by date (filed between 1982, when the mediation program began, and closed by May 1999), and by type (variance, special exemption, and nonconforming use).[4] Importantly, the conflicts did not channel through municipal councils because one party was seeking a permit—rather than rezoning—to intensify their use of property. Intensification ostensibly results in the shifting of costs to neighbors. In the observed conflicts, the most common forms of intensification were encroaching upon setbacks and exceeding parking quotas.

Prior to the filing of litigation, a municipal Board of Adjustment decided whether to award a variance, special exemption, or nonconforming to one of the disputants. The researchers estimate that over 2500 of these cases were heard in the County since 1982. The losing parties at a Board of Adjustment then has the option of appealing to the Superior Court for administrative review, using a writ of *certiorari*. Only thirty-seven of the 2500 plus cases were filed. At the New Castle County Superior Court, the plaintiff and a Board of Adjustment first go through

mandatory arbitration, if damages are sought and the total damages sought are less than $100,000. If arbitration occurs—which it did not in the cases studied here—the Judge assigned to the case recommends mediation. The mediation process may be rejected outright by either party, although the parties have some incentive to "play along" and curry favor because the their trial Judge conducts the mediation. When it occurs, mediation is often less formal than one may expect. For example, the Judge may attempt to get the parties to settle by briefly shuttling between the two rooms where the parties are separated. The cases studied in this paper had no formal record or mention of mediation, which suggests that mediation either did not occur or was substantively informal. Before the variables are presented, an illustrative conflict is described to better clarify the type of conflict in the data.

In 1995 or 1996, Ms. Alpha[5] purchased a rowhouse on a 0.03 acre lot located in northeast Wilmington, Delaware. This area is zoned for single family rowhouses, and all Alpha's immediate neighbors have similar properties. Shortly after purchasing the property, but without the required building permit, Alpha extended her second floor deck and added stairs leading to the backyard (figure 1). The original deck extended 6.25 feet from the house, which left a rear yard of 13.5 feet. The new deck and stairs, however, extended out approximately 10.8 feet and left only 4 feet to the property line. The City of Wilmington's Code required a 12-foot setback in this zone. Adjacent to Alpha's lot lived Mr. and Mrs. Beta who, shortly after construction of the deck, notified the Wilmington officials that the positioning of the new deck interfered with the privacy of their living room, which was now only 41 feet from the line of sight of someone standing on the edge of Alpha's deck. The City notified Alpha of the violation of the setback requirement and Alpha eventually sought a variance before the Wilmington Board of Adjustment. After a public hearing, the Board approved the variance and, within one month, the

Betas appealed to the Superior Court to review the Board's decision. The judge upheld the Board's decision to issue the variance because the legal standards of review restricted his attention to procedural irregularities in the quasi-judicial process rather than the merits of Alpha's actions in light of the City Code. Less than four months passed between the Board's ruling and the Superior Court decision.

This case faithfully represents others in the population. Foremost among the similarities is that the underlying conflict—Alpha's versus Beta's use of property—loses continuity once litigation begins. Specifically, the loser at a Board of Adjustment initiates a case against a Board rather than a neighbor. Mediation of such cases is difficult, inherently, because only one of the true parties to the conflict is party to the mediation. Forming the basis of mediation and litigation, the *legal* issue centers on the procedures of a Board's decision making rather than *conflict* issue itself—the incidence of external costs. Coasean bargaining at mediation is precluded *a priori* because a Board is supported by an artificially strong bargaining position, particularly its outside option. Litigation as an outside option favors a Board not only because of the aforementioned legal position, but also because of financial, legal, and experiential resources. In addition, the signaling potential of a loss at the Superior Court means that a Board has more at stake than the judicial rebuke of one of its decisions. The party appealing a Board's decision, on the other hand, merely incurs the shifted cost at stake. Komesar (1994) argues that this skewed distribution of stakes works against market-based resolution and in favor of judicial resolution. In light of these impediments to bargaining, it is not surprising that mediation failed to achieve resolution in all thirty-seven conflicts in the population.

The data are described in table 1. To construct the dependent variable, *win*, assume two parties to a conflict in which the litigated outcome is win-lose. The cost-shifter, Sender

6

represents the party seeking the variance, special exemption, or nonconforming use permit. Receiver consists of the neighbors who object to bearing the shifted cost. *Win* takes a value of 1, if Sender wins in litigation, and 0, if Receiver wins. In the population of filed conflicts, Sender won 51 percent of the time. There are six variables used to explain *win* in the predictive model.

Ncc. *Ncc* is an indicator variable for conflicts that arose in the County (thus channeling to the New Castle County Board of Adjustment) rather than in a city (a city Board of Adjustment). In the population, 65 percent of the conflicts arose in the County and saw Receiver win much more frequently than Sender at both the Board of Adjustment and the Superior Court. Only 9 out of 24 sending parties in the County won at litigation. This may reflect the reluctance to condone the increase in the intensity of use of sending parties' County land, where prevailing land uses are less intense. County-based sending parties ought to be less likely to win at litigation.

Stake. *Stake* measures the sending parties' stake by representing the percentage of the property for which Sender is currently restrained (or has a privilege to use for cost shifting) but is seeking a property right. In the Alpha case, *stake* measures the area of the deck, which extended over the setback line. The population mean of *stake* is 13 percent. An increasing stake is expected to increase the probability that Sender wins.

Prewin. *Prewin* indicates the 49 percent of conflicts in which Sender won at a Board of Adjustment, before the litigation was filed. Disputants who win at a Board of Adjustment may be more likely to win at Court.

Ldaysftos. *Ldaysftos* measures, in log form, the number of days from when the litigation is filed until the Court's ruling. The mean number of days is 316. One expects that longer litigations

may favor sending parties who have undiluted stakes and, thus, a greater commitment to litigation.

Demographic variables. For the zipcode in which each conflict occurs, *mhv* measures the median housing value and *phsless* measures the proportion of persons (25 and older) who completed their education with a high school degree or less (1990 U.S. Census Lookup).[6] One expects receiving parties will be more likely to win in areas with more expensive housing and higher mean education levels because the average neighbor challenging Sender will have more human and financial capital with which to mount a challenge.

III. Empirical Results

The argument in the preceding section is that the failure of mediation is not due to fundamental inadequacies in the Superior Court's mediation program. Rather, the lack of settlement seems to arise in that the wrong parties are mediating, which in turn is due to these conflicts channeling as variance, special exemptions, and nonconforming use disputes through Boards of Adjustment. These conflicts lack any intrinsic characteristic that leads them to such channels. In fact, there is a confluence of strategic and institutional incentives, which lead conflicts not to channel as common law nuisances and which would be more appropriate.[7] As Coase (1960) suggests and the previous section describes, nuisance cases are amenable to bargaining because the parties to the conflict are also the parties to litigation. This section argues for a predictive model, which may be used to facilitate mediation. The model describes the likelihood that the party seeking a variance, special exemption, or nonconforming use permit will win at litigation in New Castle County's Superior Court.

The mediation model is adapted from Duke's (1998) signaling model in regulatory taking conflicts. The model describes the probability that Sender wins (Receiver loses) in terms of *stake, prewin, daysftos, mhv, phsless* and *ncc*. Probit specifications of five versions of the model were estimated using LIMDEP for the thirty-seven observations in the population (see results in table 2). Multiple versions of the model were used to attentuate a collinearity problem. Although the number of observations raise concerns about the performance of the maximum likelihood procedure, the Zovonia-McKelvey pseudo-R^2 results are encouraging (this procedure is specified in Greene (1991, 427)). The data also support prior expectations about the signs of the parameters. The results are discussed in terms of the full model (1), with models (2) to (5) suggesting their robustness.

The data suggest that Sender has a 2.3 percent increase in the likelihood of winning for every 1 percent increase in her stake. This supports the assumption that sending parties fight harder for—and judges are more likely to protect—more substantial interests. This finding also accords with recent trends in regulatory takings jurisprudence; regulations that leave less "property" value are more likely to require compensation. As discussed in Duke (1998), however, this analysis speaks against the hypothesis that higher stakes for sending parties ought to suggest that receiving parties are more likely to win because higher stakes for Sender should also correllate with higher cost shifting absorbed by receiving parties. Although unobserved, this might suggest that the judicial resolution of the conflicts in the population are biased against receiving parties. The selection problem prevents definitive conclusions about judicial biases in terms of sending parties' stakes because, without knowing the total population of *potentially* litigated land-use conflicts, one cannot know what conflicts are channeling to litigation and what

9

are ending prior to court. Nevertheless, among the population conflicts stakes seem to increase with the probability that sending parties win.

Sending parties who win at a Board of Adjustment also appear more likely to win in litigation. The empirical results suggest that the effect of *prewin* on *win* is not insignificant and is substantive; indeed, winning at a Board of Adjustment contributed 84 percentage points to the probability that Sender wins at court. As in the story of Alpha and Beta, courts are reticent about overturning the decisions of political bodies. Thus, this result validates prior expectations and, most likely, reflects a constraint in legal procedure rather than an actual bias against receiving parties.

The data suggest that sending parties who live in the county are substantially less likely to win. Thus, the effect of *ncc* may represent the major bias found in the process. The inability of the model to distinguish, in general, from zero the effects of the wealth, education, and time proxies may suggest some form of vertical equity in the Superior Court's litigation process. Specifically, sending parties are no more likely to win in poor areas than wealthy areas—the data seem to suggest that there is a negative wealth effect, given the consistency of the signs across models. The education results were similar. Also, the length of litigation does not appear to favor either party, which may suggest that no party tends to win if the litigation drags on for a long time. As such, sending parties do not appear to increase the likelihood that they win by drawing out the litigation process.

IV. Summary and Policy Design

This evaluation of the resolution of spatial land-use conflicts at New Castle County's Superior Court suggests that the mediation has not proven to be successful, although strategic and

institutional incentives appeared to doom the process at the outset. The main conclusions are that: (1) mediation failed in every one of the variance, special exemption, and nonconforming use conflicts; (2) only one of the two parties to the conflict was involved directly in the mediation and litigation; and (3) the litigated outcomes do not seem to be biased (except for the county effect) toward sending or receiving parties, although the selection problem prevents definitive conclusions.

Despite these rather pessimistic results about mediation of land-use conflicts in its current form, the data may be used to design an alternate policy approach. Specifically, the predictive model describes the relation of easily identifiable dispute characteristics to the probability of winning at litigation *for the entire population of these conflicts*. If a variance, special exemption, or nonconforming use case were to be filed now, all parties (including the excluded party) could balance their subjective probabilities of winning with a more objective probability from the model, which they all could observe. This paper recommends that, during mediation, the Judge:

(1) begin the mediation by divulging the predicted outcome

(2) try to exclude the Board of Adjustment from mediation and encourage the participation of the party that won at the quasi-judicial stage.

In effect, the predicted outcome ought to act as a focal point in the "split-the-pie" game. The parties can then trade-off uncertainties—their subjective expectations and strategic considerations—with more predictable beliefs—the focal point and litigation costs. The proposed plan undoubtedly will be sensitive to the coarseness of the model, although future work will increase the precision by collecting data from the other two counties in Delaware. The

process would also be more effective if the Board of Adjustment refocussed toward an arbital role rather than an adversarial role. In particular, any mediated agreement would be strengthened if the Board stepped aside during mediation while commiting to hold a public hearing and vote on any settlement. In summary, the New Castle County Superior Court's mediation program, although highly regarded, currently is not settling variance, special exemption, and nonconforming use conflicts. However, the empirical work suggests that the program—with a procedural modification—is well positioned to mediate future conflicts successfully.

VI.   References

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Table 1—Descriptive Statistics of Dependent and Independent Variables

Name	Description	Mean	S.D.	Min	Max
win	Did sender win?	0.51	0.51	0	1
ncc	Was conflict in New Castle County?	0.65	0.48	0	1
stake	What percentage of property in conflict is at stake?	0.13	0.15	0	0.54
prewin	Did sender win at previous resolution process?	0.49	0.51	0	1
daysftos	How many days from filing in court to settlement?	316	272	11	1742
phsless	What percent of area has high school ed. or less?	0.35	0.28	0.15	0.39
mhv	What is the median value of housing units in area?	124732	43961	60000	213300

Source: Case data came from published decisions of the New Castle County Superior Court and the public-record, official documentation of the legal proceedings from the Prothonotary's office, Hermann Courthouse, Wilmington, Delaware.

Table 2—Marginal Effects of Probit Model (standard errors in parentheses)

Variable	(1)	(2)	(3)	(4)	(5)	Mean
Intercept	3.694	1.855	3.393	4.528**	-0.096	0.320
	(2.483)	(1.863)	(2.215)	(2.203)	(0.914)	
stake	2.340**	2.204**	---------	1.603*	2.102**	0.134
	(1.028)	(0.915)	---------	(0.853)	(0.875)	
prewin	0.838***	0.974***	0.604***	---------	0.844***	0.487
	(0.289)	(0.275)	(0.227)	---------	(0.267)	
ldaysftos	-0.071	-0.074	-0.025	-0.113	-0.108	5.530
	(0.151)	(0.150)	0.142	(0.129)	(0.168)	
phsless	-6.722*	-3.583	-5.451	-7.007**	---------	0.323
	(4.084)	(2.962)	3.479	(3.518)	---------	
mhv	-12.089	-8.738	-11.652	-10.189	0.763	125000
	(8.636)	(7.627)	(7.564)	(7.025)	(3.364)	
ncc	-0.598	---------	-0.466	-0.879***	-0.175	0.649
	(0.462)	---------	0.350	(0.345)	(0.307)	
Log-like	-11.84	-12.86	-15.83	-17.53	-13.46	
Rest Log-like	-25.63	-25.63	-25.63	-25.63	-25.63	
Chi-squared	27.59	25.56	19.61	16.20	24.35	
Significance	0.0001	0.0001	0.0015	0.0063	0.0002	
Pseudo-R^2	0.78	0.72	0.65	0.65	0.69	

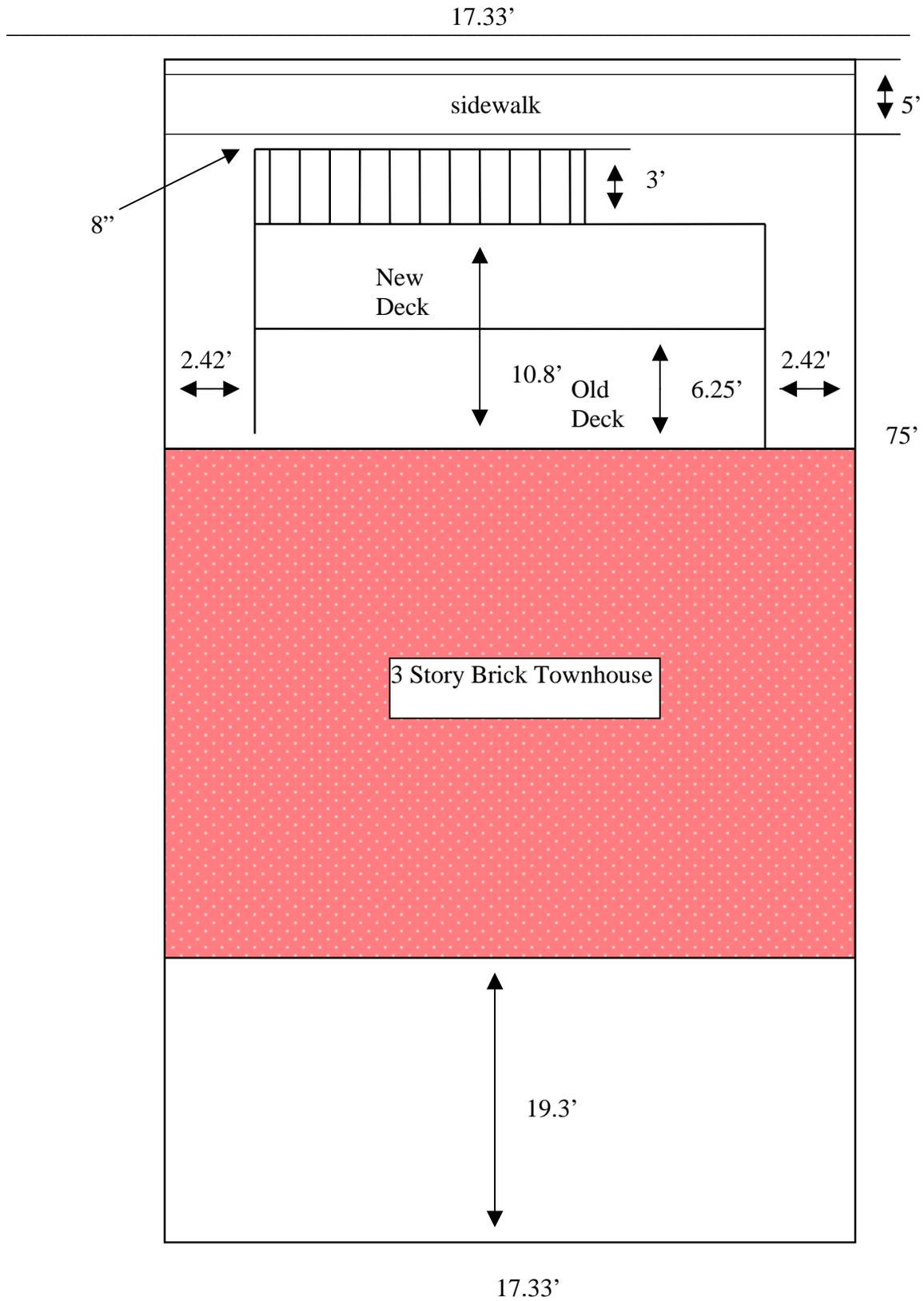Figure 1: Sketch of Alpha's Property and Variance

Figure 1: Sketch of Alpha's Property and Variance

[1] Importantly, the defendant in these cases is always a governmental agency—rather than the other party with interests at stake—which is the key hypothesis in this paper about why mediation fails.

[2] At least three conflicts are currently open.

[3] Web address: http://www.delawnet.com, accessed January 13,1999

[4] The conflicts may be divided by type: six use variance, twenty area variance, seven special exemption, and four nonconforming use.

[5] Although the data are from public records, this paper does not use the actual names of the parties.

[6] United States Census Lookup (1990), http://venus.census.gov/cdrom/lookup

[7] This research began as an attempt to evaluate the mediation of nuisance cases. When "non-land-use" conflicts were excluded from the sample (personal injury, physical invasion, etc.), however, not a single land-use nuisance case was filed for damages between 1982 and 1999. Of course, one suspects that some nuisance cases for injunctions are filed in New Castle County. Such cases file through the Court of Chancery, which is only beginning its mediation program.

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College of Agriculture and Natural Resources
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For further information write to: Dr. Thomas W. Ilvento, Chair

Department of Food and Resource Economics

University of Delaware

Newark, DE 19717-1303

UNIVERSITY OF DELAWARE.