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ABSTRACT

This study uses hedonic property models to explore how coastal real estate markets subject to heterogeneous information treatments respond to flood risk. We identify reactions to flood risk, distinctly from price effects due to flood damage, by examining non-local flooding events. Utilizing a difference-in-difference methodology, we test whether the coastal real estate market in New Jersey responds to several well-publicized hurricanes and tropical storms that did not strike the Atlantic seaboard. We find that homes in high flood risk zones situated in towns that participate in public flood awareness activities incur a 7 to 16 percent decrease in price after the non-local shock.

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I. Introduction

This paper uses hedonic models to examine the influence of flood risks on coastal real estate markets. While other authors have written in this context (Hallstrom and Smith, 2005; Bin, Kruse, and Landry, 2008; Price and Chen, 2011; Bin and Landry, 2013; Bernstein, Gustafson, Lewis, 2018), the present study offers three key innovations. First, we credibly identify the market response to flood risk as distinct from manifest damage due to realized flooding. Second, we demonstrate the importance of information about flood risk in triggering market responses. Third, while a nascent literature focuses on market response to long-run sea level rise (Bernstein, Gustafson, and Lewis, 2018) we show that *current* flood risk, over and above risk discounts associated with long-run outcomes, affects real estate prices.

Our identification strategy relies on the following consideration: observed housing market responses to a flooding event (or other natural disasters) occurring in said market conflate the effect of risk perception among buyers and sellers together with actual property damage. To separate these two effects, this paper examines whether prices for properties at risk of coastal flooding events adjust when environmental hazards manifest in geographically distant markets. This design decouples risk discounts from property damage; price effects must reflect risk perception because there is no property damage. One motivation for this strategy is evidence that people's current visceral experiences can inform their beliefs about the likelihood of future states. For example, Risen and Critcher (2011) show that experiencing warm indoor temperatures enhanced people's beliefs in global warming and that thirst influenced forecasts of drought. Our design hypothesizes that exposure, through extensive media coverage, to a non-local flooding shock acts as a visceral state influencing homeowners' beliefs about their own future flood risk.

Why is it useful to decouple market responses due to risk perception from damages? Decisions about how governments should manage climate change, air pollution, and a multitude of other environmental market failures depend critically on valuations of risk. Many prior studies that quantify environmental risk rely on one of two approaches: damage function methods and revealed preference techniques. The damage function approach employs simulation models[1] to facilitate inferences regarding the probabilities of harmful events. Then, monetary values for associated outcomes (health effects, property damages, crop losses) are applied to predicted event frequencies (USEPA, 1999; 2010; Nordhaus, 2006; Mendelsohn, Emmanuel, Chonabayashi, 2011). Together, these steps, which comprise the damage function approach, yield risk-weighted damage estimates.

Revealed preference techniques, specifically the hedonic pricing method, offer an alternative approach to risk valuation. For more than forty years, economists have used hedonic models to elicit values for non-market services and public goods[2]. This tack extracts evidence embedded in market transactions regarding the value for non-market (or near-market) environmental services. The values produced by hedonics serve as an important point of comparison to risk measurements generated by the damage function method (Smith and Huang, 1995; Palmquist and Smith, 2002).

The approach to risk valuation developed and applied herein provides just such a counterpoint to the more common damage function approach found in the climate economics literature. Further, methodologically, demonstrating that revealed preference techniques are able to detect and measure market responses to

[1] In the context of climate change such models might include general circulation models of the earth's climate or storm forecast models for hurricanes. For local air pollution such models might encompass air quality models and epidemiological or toxicological dose-response models.

[2] One common, and especially relevant, application of hedonics in the context of risk assessment is the valuation of air quality. Prior papers use hedonics to ascertain the discount associated with proximate pollution levels (Bajari et al., 2012; for a review of this literature see: Kuminoff, Smith, Timmins, 2013).

current risk in this context will open-up a series of future studies in other geographic settings.

This paper's second contribution centers on the role of risk-relevant information in market responses to natural disasters. Our examination of the role of information leverages geographic variation in communities' enrollment in public flood awareness programs. In a triple difference framework, we assess whether non-local flooding events impact market outcomes in treated towns (those enrolled in flood awareness programs) relative to those areas not enrolled. Aside from empirically testing for heterogeneous reactions to distant floods, we argue that this design has potentially fundamental implications. Prior literature contends that asset bubbles arise, in part, from information frictions (Brunnermeier and Oehmke, 2018). The flood awareness program we study infuses risk-relevant information into the market. Corrections operating through purely informational channels may be welfare improving if they diminish either the likelihood or the severity of future bubbles. This is especially important for asset bubbles in large markets (such as residential real estate) that can have adverse and far-reaching consequences.

Our third contribution stems from this study's focus on current risk valuation. Specifically, recent contributions to the empirical finance literature report that coastal real estate markets embody discounts from long run risks associated with expected, eventual sea level rise (Bernstein, Gustafson, and Lewis, 2018). In contrast, the present analysis tests whether coastal markets capitalize current risks. This is an important distinction. Episodic flooding from climate change is currently occurring in major metropolitan areas in the United States and elsewhere in the world (New York Times, 2019). Efficient policy interventions to manage current risk depends on reliable estimates of the value of such risks, as distinct from risks associated with eventual sea level rise. Complementarily, coastal markets' capacity to capitalize risks, and in turn "guide" investment in

physical capital absent public policy, hinges on adequate information. The paper contributes to both dimensions of this issue.

The empirical setting in which we explore flooding risks is the New Jersey coastal real estate market. This is a large, and economically significant context[3] spanning 130 miles of coastline. The value of land and property along the coast has grown from less than $1 billion in 1960 to greater than $170 billion today.[4] In this geographical setting, residential properties face varying levels of flood risk. Public policy plays a crucial role in conveying risk information to market participants. Risk designations are provided by the National Flood Insurance Program (NFIP), which is administered by the Federal Emergency Management Agency (FEMA). Communities choose whether to participate in NFIP.[5] Once a community joins the NFIP, Flood Insurance Rate Maps (FIRMs) are drawn to demonstrate flood risk levels.

The NFIP offers additional information on flood risk through Community Rating System (CRS). The CRS is a voluntary component of the NFIP that encourages communities to increase floodplain management above the minimum federal standards. The program consists of four categories of actions: public information, mapping and regulation, flood damage reduction, and warning and response. Because the majority of CRS communities pursue low-cost activities such as providing public information (Michel-Kerjan, et al., 2016), we posit that communities enrolled in CRS have better information about flood risk. In addition

[3] We define the New Jersey coastal real estate market as homes located in Cape May, Atlantic, Ocean, and Monmouth counties. We do not include Middlesex County as a shore county, although it does contain the northern most part of the New Jersey coastline. This is due to the region's proximity to New York and that the characteristics of the area are different than those of the beach towns contained in the other four counties.

[4] "How Rising Seas and Coastal Storms Drowned the U.S. Flood Insurance Program" Yale Environment 360. Accessed 6/9/2017

[5] New Jersey has consistently been one of the top five states participating in the National Flood Insurance Program. In 2016 there were 231,956 policies in force in New Jersey. This number was only exceeded by Florida, Texas, Louisiana, and California.

to homeowners having better information, prospective buyers have better information as well since the public awareness activities may be visible to buyers as they tour the town and homes for sale.

For our identification strategy to be viable, New Jersey homeowners must be "exposed" to the non-local shock. Unlike most hedonic analyses of coastal flood risks that rely on physical exposure, our strategy depends on exposure to risk information. We contend that it is quite likely homeowners in New Jersey were aware of Hurricane Katrina. The storm (and its subsequent destruction) was extensively covered on television and in newspapers throughout the United States. Utilizing Google Trends provides support for this claim. In Figure 1 we show that New Jersey residents searched for information related to the storm immediately after Hurricane Katrina made landfall in August, 2005. Interestingly, the New Jersey residents search again for information regarding Hurricane Katrina, when Hurricane Irene made landfall in New Jersey in 2011 and Hurricane Sandy made landfall in New Jersey in 2012. This further demonstrates the connection between local risk and non-local shocks.

A. Relevant Literature.

Prior research uses revealed preference techniques to value flood risk. Bin and Landry (2013) find that home prices decrease after a flooding incident, but that such discounts manifest only after a local flood. Hence, the price decrease cannot be parsed into a risk effect and that due to property damages. Additionally, Keenan, Hill, and Gumber (2018) find differential trends in property values in Miami-Dade County, Florida. Specifically, they report that lower elevation homes have appreciated less rapidly than those situated at higher elevations. Importantly, they too cannot disentangle the effects of flood risk perception and property damage in driving the differential trends. Hallstrom and Smith (2005) attempt to

separate out the information about flood risk from flooding damage by using an instance where a hurricane is predicted to hit an area, but instead the hurricane hits a neighboring county and causes wide spread damage there. The authors, using a difference in difference methodology, find that homes in high risk flood areas see a 19% decrease in property values relative to those in low risk areas in the county that the hurricane missed. The proximity between the physically affected county and county in which price effects are detected generates some concerns regarding identification of a pure risk effect. First, many residents may have prepared for the hurricane and evacuated. The authors do not discuss how these behaviors could affect prices in ways distinct from flood risk[6]. Additionally, the timing of the study may confound the information effect of Hurricane Andrew in 1992 from the 1994 law change that made flood insurance premiums mandatory in high risk areas, therefore making it more expensive to own a high risk home.[7] Finally, Hurricane Andrew caused significant damage to the neighboring county, which could have influenced prices in the near-miss county.

Bernstein, Gustafson, and Lewis (2018) report that properties at risk of sea level rise sell at a 7% discount, relative to comparable properties. Further, they argue that this effect is due to perception of future risk, rather than property damage, by showing that rental rates do not evince such a discount. While Bernstein, Gustafson, and Lewis (2018), demonstrate that property markets capitalize flooding risk, their focus is on long run cash flows whereas we zero in on acute, short run responses to current flooding events. Climate science indicates that anthropogenic climate change is currently affecting sea level and coastal flooding (IPCC, 2013). Our focus on capitalization of current risk speaks to this

[6] For example, boarded-up homes may be aesthetically unappealing to prospective buyers.
[7] It is also difficult to separate out flood risk information due to zone designations from the cost of insurance premiums. Several studies have shown that flood zone identification does lead to lower housing prices, but this may be due to the cost of the insurance premiums. See for example Bin et al., 2009

near-term dimension of climate change and flood risk. Thus, our work is complementary to that of Bernstein, Gustafson, and Lewis (2018).

B. Summary of Results.

Our empirical analyses rely on a differences-in-differences framework. We begin by assigning homes in high-risk areas, as designated by FEMA's FIRMs, to the treatment group. The occurrence of a non-local hurricane or tropical storm identifies the time of treatment. In this standard specification, we do not find evidence of a drop in price following a storm that caused flooding in other regions.

Our next specification employs a triple difference, which incorporates whether homes are in CRS communities, and therefore subject to the information treatment. We find a significant drop in price in CRS towns after a storm.[8] For Hurricane Katrina, inclusive of all sales, we find significant risk discounts of 7% on sales beginning four months after the storm. This effect endures for sales up to one year after the storm. The discount peaks roughly 10 months following Katrina. Employing a repeat-sales model (Mendelsohn, et al., 1992) with parcel fixed effects, the effect increases. We report a drop of 11% for sales occurring within six months of the storm. This risk discount increases to 15.7% for sales within one year of the storm. We interpret this differential effect in CRS communities as an indication that information on flood risk is important to how markets respond to risk signals. We also analyze several other hurricanes that did not impact the New Jersey coast. In the case of four other hurricanes between 2001 and 2007 (or months with several storms occurring in rapid succession) we

[8] Note our indicator for participation in CRS is defined as participating in public awareness activities and public map information activities. See Table A1 for more details.

find evidence of risk discounts on transactions in CRS communities following each of these storms.

We explore numerous additional specifications in order to test possible threats to our identification strategy. First, are local flooding events (in New Jersey) that happen after a distant storm strikes driving our results? We estimate a model that controls for local flooding events and our results are unaffected. Second, the New Jersey coastal market is comprised of numerous second-home owners. These market participants may impart greater liquidity on the market and essentially sell en masse following a storm. This phenomenon would be especially problematic if second-homes owned by non-residents comprise a large share of properties in CRS towns. This may conflate the role of information provided by CRS with risk preferences of non-residents. Exploiting the rich nature of the data, we do find evidence that non-residents are more likely to sell after non-local hurricanes, however the effect is very small. Third, non-resident buyers may lack full information about flood risks and, hence, it may the case that sales following non-local storms exploit this information asymmetry. We find no evidence that non-resident buyers are more likely to make purchases after the hurricanes of interest. Finally, it could be the case that especially high-risk towns (relative to towns that do not enroll) select into the CRS program which would fundamentally affect the inferences drawn from our primary results. We detect no evidence that average flood insurance claims are higher in CRS communities.

The remainder of the paper proceeds as follows. Section II describes the theoretical model, Section III presents the data and empirical methodology, Section IV reports the results, and in Section V we conclude.

II. Theoretical Model

The paper's empirical focus lies on credible identification of risk valuation. The goal of this theoretical exposition is to demonstrate, conceptually, potential measurement issues associated with relying on observable characteristics to extract flood risk valuations.[9] We start by building on the theory set out by Freeman, Herriges, and Kling (2014). Let $u(Z, X_i, A_i)$ denote a representative consumer's utility function, defined over (Z) a composite consumption good, a bundle of physical parcel characteristics (X_i), and (A_i), a coastal amenity bundle, for parcel (i). This index may capture proximity to coastal resources, view, and frontage services. We assume that $\partial u/\partial Z \geq 0$; $\partial^2 u/\partial Z^2 \leq 0$. Further, the signs of the partial derivatives with respect to (A_i) and (X_i) depend on the specific arguments within each vector of characteristics. Let (P_i) denote the price of parcel (i) where P is a function of (X_i, A_i, π_i), where (π_i) represents coastal flooding probability, and (M) reflects income of the representative consumer.

Suppose every so often, coastal flooding occurs with probability π_i; we allow flooding risk to vary by parcel (i), because coastal flood risk is heterogeneous across locations. Since location dictates realizations of (A_i) and (π_i), the index (A_i) reflects both amenities and disamenities associated with proximity to the coast. Let $H(X_i, A_i)$ be a function of the parcel characteristics that measures housing services. Finally, we define (F_i) an indicator variable that assumes a value of zero if a flood occurs for parcel (i), unity otherwise. If a flood occurs, the consumer will no longer have access to the housing services.

Normalizing the price of the composite good to 1, we can define the expected utility of purchasing a home as:

[9] Our empirical model uses flood shocks as the signal.

$$(1) \quad E[u] = \pi_i \, v[M - P(X_i, A_i, \pi_i), 0 * \mathrm{H}(X_i, A_i)] + (1 - \pi_i)\, v[M - P(X_i, A_{i,}\pi_i), 1 * \mathrm{H}(X_i, A_i)]$$

where v is the indirect utility function of the representative consumer. To demonstrate the conceptual difficulty in relying on the bundle of coastal amenity services to extract flood risk valuation, we show the first-order condition with respect to (A_i) in (2):

$$(2) \quad \frac{\partial E(u)}{\partial A_i} = -\pi_i \, v_m^0 \frac{\partial P_i}{\partial A_i} + (1 - \pi_i) \, v_{h_i} \frac{\partial h_i}{\partial A_i} - (1 - \pi_i) v_m^1 \frac{\partial P_i}{\partial A_i} = 0$$

Rearranging terms reveals that price depends on the coastal amenity bundle in the following way: $\frac{\partial P_i}{\partial A_i} = \frac{(1-\pi_i) \, v_{h_i} \frac{\partial h_i}{\partial A_i}}{\pi_i \, v_m^0 + (1-\pi_i) v_m^1}$. This partial effect $\left(\frac{\partial P_i}{\partial A_i}\right)$ may be either positive or negative depending on how utility varies with proximity. Intuition and empirical evidence suggests that $\frac{\partial P_i}{\partial A_i} > 0$. Hence, the combined proximity, view, and frontage services overwhelm disutility from flood risk.

As an alternative to inferring flood risk valuation from the bundled coastal amenity index, we propose zeroing in on market participants' perception of flooding probabilities. By focusing solely on if the perceived risk changes we can separate out the flood risk from the amenity of coastal proximity. Our subsequent empirical strategy hinges on non-local flooding shocks because such events (may) induce changes in perceived risk while not also producing flood damages which would affect the value of the coastal amenity. Assuming dependence of price on flooding probability, we return to (1) and take first order conditions with respect to π:

$$(3) \qquad \frac{\partial P_i}{\partial \pi_i} = \frac{v[M-P(\pi_i),0] - v[M-P(\pi_i),\mathrm{H}(X_i,A_i)]}{\pi_i v_m^0 + (1-\pi_i) v_m^1}$$

Expression (3) is negative, as $v[M - P(\pi_i), 0] < v[M - P(\pi_i), \mathrm{H}(X_i, A_i)]$. Thus as perceived risk increases, prices fall. A conceptual advantage of our empirical strategy is that geographically distant events, by virtue of their "remoteness", can only operate through risk perceptions. Thus, risk perception changes while all other aspects of all parcels remain fixed. This stands in stark contrast to a strategy relying on cross-sectional differences in risk. In such a setting, perceived risk changes along with exposure to coastal amenities and potentially other characteristics.

We can depict this graphically as well. Figure 2 depicts the marginal implicit price function corresponding to the amenity bundle (A_i). As above, price is a function of the vector of characteristics associated with parcel (i), denoted (X_i), and the bundle (A_i). Further, in the event that market participants relevant to parcel (i) are "treated" by a non-local flooding event is captured by the difference between ($\pi_0 =$ no flood) and ($\pi_1 =$ flood). Figure 2 suggests that above some threshold level of the amenity bundle ($\underline{A}$), the hedonic price function diverges according to the realization of (π_i). This is consistent with the idea that only owners of parcels proximate to the coastal resource, and therefore at higher risk of flooding, are potentially affected by the remote flooding event.

Figure 2 shows that an increase in perceived risk ($\pi_1 > \pi_0$) leads to a lower price for higher risk homes. Hence, there is a risk discount. This change is dependent on the homeowner's perceived risk changing after the shock. We argue, and test below in the empirical section, that informed market participants transacting high-risk parcels are more likely to update their perceived risk after a non-local shock than relatively uninformed participants in low risk zones.

III. Data and Empirical Analysis

This paper uses hedonic property models to test whether homeowners respond to non-local flooding events as a means to plausibly identify the value attributed to flood risk rather than physical property damage. The empirical analysis relies on several sources of data. The New Jersey Treasury provides housing parcel data. This database contains an array of information including the address, type of property, price, size of the property, year built, and information about the owner and the buyer. All residential properties in New Jersey are included in the data which span the years from 2000 to 2015. As Hurricane Sandy hit New Jersey in October of 2012 and provided a large local risk shock, the analysis considers dates prior to Hurricane Sandy. Since precise location data is needed to assess flood risk, we geolocate all properties in the database to identify the longitude and latitude coordinates.[10]

The analysis relies on risk designations provided by the NFIP, which was created through the National Flood Insurance Act. The NFIP provides flood insurance policies to homeowners in flood-prone communities. Once a community joins the NFIP, FIRMs are created to demonstrate the level of flood risk. The analysis uses flood risk information from the FIRMS created by FEMA's NFIP.[11] In Figure 3 below we present a map of risk zones for the counties in our analyses. Figure 4 overlays Figure 3 with a map of homes that sold from 2000-2012. Each parcel is assigned to a risk zone, which, in turn, affects the insurance premium. In the New Jersey coastal market, many of the homes are designated in Zones AE, AO, or V. Zones AE and AO indicate the home is in the 100-year

[10] For this work we used BING maps API along with additional internet tools like google maps.
[11] We utilized the preliminary firms as opposed to the original firms as those had not been updated since the 80s. We argue the preliminary firms are a better assessment of current risk.

floodplain, while Zone V indicates that the home is in a coastal area and subject to velocity hazard (wave action).[12]

The database delineating participation rates in CRS covers all municipalities from 2000 to 2015.[13] FEMA defines the level of participation based on the total number of points a town received for their prior CRS activities. The database reports the participation level for each town annually and it provides detailed information on the type of activities undertaken and the associated point values. The present analysis focuses on CRS participation in public awareness activities.

We focus on this dimension of the CRS for two reasons. First, we are interested in exploring the role of *information* with respect to risk valuations. Second, prior research in this area has shown that people do not always know or understand their risk (Bakkensen and Barrage 2017). Ascertaining individual market participants' endowment of information is not possible. As such, we use town-level CRS participation in public awareness activities as a proxy for market participants' information since one of the most common actions CRS towns take are public awareness campaigns.[14]

Because housing markets respond to local environmental quality (Bajari et al., 2012), and because such attributes are likely correlated with proximity to coastal amenities, we use the monthly average level of fine particulate matter ($PM_{2.5}$) particles from EPA's Air Quality System (AQS) dataset to control for air pollution. Further, we employ data on the number and value of new builds from the Census Building Permit Survey to control for changing market conditions. Finally, to identify the storms that comprise the non-local shocks, we selected

[12] There are some homes designated as Zone A in the four relevant counties. However, homes designated only as A, and not AE or AO, are along rivers and not along the coast. Thus they are not included in our analyses.
[13] The database was provided from FEMA upon request.
[14] We identify towns that participate in at least 1 of the 300 level activities, and either 410 or 440. The description of these activity codes is shown in Table A1.

storms that did not affect the New Jersey coast in years without a large flood shock to New Jersey.[15] This resulted in the following list of named storms: Hurricane Allison, Charley, Katrina, Erin, and Dean, along with multiple storms that struck during September of 2002.

The estimation dataset is summarized in Table 1. Approximately 16% of the houses are in municipalities that meet our definition of CRS participation.[16] Further, 11% of homes are located both in high risk zones and in CRS municipalities. Overall participation in CRS varies both at the class level and across the type of activity level. The majority of the points are achieved through activities coded in the 300s and 400s. These categories contain public information activities. The average home was built in 1974 and has approximately 1,378 square feet. The average sales price was almost $327,000 and there is a strong positive skew to the price data.

Table 2 Panel A summarizes CRS enrollment status by flood risk level. Roughly 27 percent of parcels occur in high risk zones. Within this category, 42 percent of parcels are in CRS-enrolled towns. Table 2 Panel B reports that properties in high flood risk zones tend to sell for higher prices. This is expected because flood risk is effectively bundled with coastal amenities (views and proximity). Table 2 Panel B also demonstrates that CRS participation (and its interaction with the high flood risk indicator) is also positively correlated with prices. While this positive correlation is suggestive, the regression analyses that follow test whether this relationship changes both after a storm and conditional on controlling for other important factors that may also effect sale prices.

[15] Some remnants of these storms did eventually pass over New Jersey, however these storms did not induce local flooding.

[16] As defined in Table A1. Unless otherwise noted our use of CRS or CRS participation throughout the paper relies on this definition.

The empirical analysis builds on the hedonic literature that describes the prices of a durable good (in this case, housing) as a function of its attributes (Ridker and Henning, 1967). Further, in order to identify the causal effect of flooding risk and information on price, we invoke a differences-in-differences specification (DD). Our treatment group consists of properties in the high risk zone ($zone_i$) as designated by FEMA's flood insurance risk maps. These homes are all located within the Special Flood Hazard Area (SFHA), which are areas that have a 1 percent annual chance of flooding. We denote homes outside of the (SFHA) as the control group. The treatment period is a flexibly defined period of time after the storm ($post_{ym}$). (Without a clearly defined post-storm period, we explore this semi-parametrically, considering a range of post-storm periods of 2 to 12 months.) The time windows are lagged by 1 month as many sales are negotiated 30 days (or longer) prior to the actual sale date.

The empirics begin with the simplest model in (5), where (i) denotes parcel, (t) reflects town, and (y) and (m) are year and month, respectively. This model does not control for any factors associated with parcels or market conditions other than the remote flood shock.

$$(4) \quad \log(p_{iym}) = \alpha_0 + \alpha_1 Zone_i + \alpha_2 Post_{ym} + \alpha_3(Zone_i * Post_{ym}) + \varepsilon_{iym}$$

The model in (6) expands on (5), by including year, month, county-year, and town (municipality) fixed effects (*FE*).[17] Model (6) also includes time-variant controls: an indicator of CRS public awareness participation (CRS_{ty}), the number of monthly sales, the ratio monthly sales to average monthly sales in this

[17] We use the monthly fixed effects to control for seasonality and the year fixed effects to control for changes to the real estate market for the state of New Jersey over time. We use the town fixed effects to control for specific attributes of the municipality that our other variables do not capture. Finally, the county-year fixed effects are included to control for anything that is changing over time in a specific county.

municipality, and the age and size of the home. The $char_i$ and $char_{tym}$ terms index variables that are characteristics of house and town by year and month, respectively.

$$(5) \quad \log(p_{iym}) = \alpha_0 + \alpha_1 CRS_{ty} + \alpha_2 Zone_i + \alpha_3 (CRS_{ty} * Zone_i) + \alpha_4 Post_{ym} + \alpha_5 (Zone_i * Post_{ym}) + \alpha_6 char_{iym} + \alpha_7 char_{tym} + FE_y + FE_m + FE_t + FE_{cy} + \varepsilon_{iym}$$

The model in (7) is a repeat sales model featuring parcel fixed effects (Mendelsohn et al., 1992).

$$(6) \quad \log(p_{iym}) = \beta_0 + \beta_1 CRS_{ty} + \beta_2 (CRS_{ty} * Zone_i) + \beta_3 Post_{ym} + \beta_4 (Zone_i * Post_{ym}) + \beta_5 char_{iym} + \beta_6 char_{tym} + FE_y + FE_m + FE_i + FE_c + \varepsilon_{iym}$$

Given the panel structure of the model, *Post* indicates that a sale occurs during the post-storm period and the parcel was previously sold prior to the storm. Hence, the repeated sales must straddle the storm to be included in this dataset. The fixed effects in (7) encompass year, month, county-year, and parcel (i). Further, note that model (7) retains the controls for time-variant characteristics of the home, such as living space and the age of the home and environmental and market conditions including: $PM_{2.5}$ pollution, the number of monthly sales, the ratio monthly sales to average monthly sales in this municipality, and new builds. The models in (5), (6), and (7) are applied to each of the storms listed above. The main empirical results section focuses on Hurricane Katrina.

The following specifications invoke a triple-difference approach to test whether information on flood risk differentially affects market responses to distant storms.

In addition to the terms in (6), the triple difference features an interaction between CRS, the post-storm indicator, and the high risk flood zone control. This interaction term enables a test of how owners of high risk parcels respond after a storm and how information (proxied by CRS participation) might change their response. We also include the interaction between CRS and Post. This specification applied to all sales in shown in (8).

$$(7)\quad log(p_{iym}) = \alpha_0 + \alpha_1 CRS_{ty} + \alpha_2 Zone_i + \alpha_3(CRS_{ty} * Zone_i) + \alpha_4 Post_{ym} + \alpha_5(Zone_i * Post_{ym}) + \alpha_6(CRS_{ty} * Post_{ym}) + \alpha_7(CRS_{ty} * Zone_i * Post_{ym}) + \alpha_8 char_i + \alpha_9 char_{tym} + FE_y + FE_m + FE_t + FE_{cy} + \varepsilon_{iym}$$

The triple difference is also applied in the panel data context as shown in (9).

$$(8)\quad \log(p_{iym}) = \beta_0 + \beta_1 CRS_{ty} + \beta_2 (CRS_{ty} * Zone_i) + \beta_3 Post_{ym} + \beta_4(Zone_i * Post_{ym}) + \beta_5(CRS_{ty} * Post_{ym}) + \beta_6(CRS_{ty} * Zone_i * Post_{ym}) + \beta_7 char_{iym} + \beta_8 char_{tym} + FE_y + FE_m + FE_i + FE_{cy} + \varepsilon_{iym}$$

The analysis also explores several robustness checks in an effort to dismiss various threats to our identification strategy. The particular specifications employed are shown and discussed in section IV.C. below.

IV. Results

The empirical results section begins by focusing on Hurricane Katrina and the coefficients of interest. The detailed regression results for all storms are covered in the appendix. A table summarizing the estimation results for these additional storms is included in this section. We also conduct a battery of robustness checks. The empirics begin with the standard DD model shown in (5), the fixed effects model with controls (6), and the repeat sales models (7), before moving on to the triple difference specifications shown in (8) and (9).

A. DD Specification: High Risk Zone as Treatment.

Table 3 presents the results from fitting (5). The table includes specifications for post storm periods of 2 to 12 months. Each column represents post storm windows of a particular length. For example, column 1 employs a 2 month post-storm period, column 2 corresponds to 4 months post period, and this pattern continues through column 6 which corresponds to a 12 month post storm period. The coefficients on the post storm variable and the interactions between the post storm and high-risk zone controls are reported for each post-storm period in each column.[18] For example the coefficient on the Post # Months variable in column 1 reveals the effect on sales prices when the post-storm period is defined as two months after Katrina.

As anticipated Table 3 reveals a premium on parcels sold in high risk zones of about 18.5% in all specifications. It likely stems from the frontage, view, and proximity services associated with parcels in high-risk zones. Housing prices were systematically higher, by roughly 40%, in the post-storm period. This premium is robust across each of the post-storm period designations. We find no

[18] This is the setup we use in all the tables that rely on these 6 post storm periods. See Table A2 for more information on the variables in each model.

evidence of a risk discount for parcels sold in high risk zones after the storm. In fact, the coefficient on high risk interacted with post-storm is robustly positive and significant. These results suggest that properties in high-risk zones sold for a premium *after Katrina* of between 9 and 15 percent.

Table 4 reports the estimates from model (6), which adds controls and a battery of fixed effects to (5). Adding controls and fixed effects accentuates the premium for parcels in high risk zones from 18.5% to 23%. Participation in CRS is associated with a small premium (less than 5%) though this effect is imprecisely estimated. The coefficient on the CRS-by-high risk zone term is negative and significant, implying a discount relative to high risk parcels not in CRS towns of about 13%. Consistent with Table 3, we find no evidence of a risk discount for parcels sold in high risk zones after Hurricane Katrina. The coefficient on the interaction between high risk and post storm is significant and ranges from 7 to 11 percent. Many of the other controls in model (6) behave as intuition would suggest (such as square footage and structure age) bolstering the credibility of the model. The results of the various controls are included in the appendix in Tables A34 through A38.

Table 5 reports results from the repeat-sales model. This specification reduces the estimation sample from greater than 170,000 observations to about 60,000. The high risk zone control drops out with parcel fixed effects. CRS participation is associated with a premium of about 8 to 10%. The coefficient on the CRS-by-high risk zone interaction is no longer robustly significant. The repeat sales model also suggests parcels sold during the post-Katrina periods did so at a small discount (less than 3%). However, the positive and significant coefficient on the high risk-by-post storm term obtains across all specifications. The effect estimate suggests a 10% premium on homes in high-risk zones after Katrina.

Across specifications in Tables 3, 4, and 5, we report evidence of a premium on sales in high risk zones after Katrina. What are possible explanations

for this result? First, this premium may be due to an average increase in housing prices over time specific to high coastal amenity (and therefore high risk) homes. Anecdotal evidence suggests that ocean front homes and those with ocean views (those typically categorized as high risk) did not see the drop in prices that other homes in these coastal towns experienced in 2006 and 2007.[19] (See Figure A1, which shows average sales price trends for high risk and low risk groups.) Another explanation is that there was a substitution effect driving this result; homeowners considering whether to purchase coastal property were deterred from the Gulf Coast market by Hurricane Katrina. A viable (though imperfect) substitute market is in coastal New Jersey. Such an effect could increase prices differentially in high-risk zones.

B. Triple Difference Model: High Risk Zone, CRS Enrollment as Treatments.

Bringing equation (8) to the data enables an exploration of the role that risk information plays in the coastal market. Table *6* presents the results from fitting equation (8) inclusive of all sales. Many of the results reported in Table 5 manifest in the triple difference context as well. These include the imprecisely estimated premium on CRS participation, the 23% premium associated with parcels in high risk zones and the 13% discount on parcels in high risk zones and CRS towns. In all of the specifications, the interaction between the high-risk zone and post-storm indicators remains positive and significant. The premium on such sales is remarkably robust, ranging between 10 and 12 percent.

Of particular interest is the interaction term between CRS enrollment and the high-risk zone and post-storm indicators. Table 6 reports that this triple interaction term is negatively associated with price for all specifications.

[19] See "In New Jersey Summer Deals Amid a Downturn", The New York Times, 8/9/2009.

Beginning with the post-storm specifications at 6 months, the triple interaction is statistically significant at conventional levels. The effect estimate is also economically significant, implying a risk discount in CRS towns of between 7 and 11 percent. In contrast to the effect of being in the high risk zone, which attenuates with longer post-storm periods, the information treatment has a larger effect for longer post-storm periods.

This result indicates that high risk homes in CRS participating towns sold for a lower price after Katrina relative to parcels in non-CRS towns. Recall that the vast majority of towns enrolled in CRS pursue activities that provide community members with information about flood risk. One interpretation of this finding is that this information shock makes market participants *more sensitive* to a geographically distant, well-publicized coastal flooding event.

Table **7** reports the results from the repeat sales model. Several results from Table 6 obtain here as well. Of particular interest, the coefficient on the interaction between the high-risk zone and post-storm controls is positive and significant. Its magnitude is similar to that observed in prior specifications. Additionally, the triple interaction between CRS enrollment, high-risk zone, and post-storm is negative and significant for all specifications. The effect estimate suggests that a high risk home in a high-participating CRS town sells for a discount ranging from approximately 11 to 16 percent following Hurricane Katrina.[20] We argue that the flood risk information provided to market participants via CRS activities is driving this discount.

[20] In our preferred specifications, we limit our analysis to compare sales before the storm to the post storm window. Recall that this post-storm period is flexibly defined from up to 2 months to one year after the storm. We choose to limit the post storm period to no more than one year because of the financial crisis. In an alternative specification, we include all sales after the storm. These results are presented in Table A3. The results are consistent with our main specifications. However, the coefficients are slightly smaller in absolute value terms and insignificant in two of the specifications.

C. Robustness Checks.

This section proceeds by first examining results from all storms. It then probes whether the parallel trends assumption crucial to causal inference in the DD framework holds in the pricing data. Finally, this section explores a number of alternative mechanisms that may confound the paper's ability to attribute the changes in prices observed in the data to the tropical cyclones and the CRS information programs. We also explore alternative definitions of CRS participation and whether historical flood information affects our results.

Other Tropical Cyclones. The preceding results focus on Hurricane Katrina due to the immense damage, considerable loss of life, and highly publicized nature of the storm. Table A4 summarizes the results from regression analyses on the other storms. This table reports the number of specifications that yield negative and significant coefficients on the triple interaction term (CRS x high risk x post storm). For each storm, there are six specifications that encompass all sales and six repeat sales specifications. The number of specifications is dictated by the semi-parametric approach to measuring post-storm periods. The full set of results for all storms is provided in Tables A19 through A43 in the appendix. Table A4 indicates that each storm, except for Hurricane Allison, adversely affected housing prices among high risk properties in towns that participated in CRS. Hurricane Allison made landfall in Texas in June of 2001. The lack of significant results associated with this storm is consistent with the fact that very few towns participated strongly in CRS at this time. For the multiple storms that struck in September of 2002, five out of twelve specifications yield negative, significant coefficients on the triple interaction of interest. For Hurricane Charley, ten out of twelve specifications produce negative, significant coefficients on the triple interactions of interest. And, similar results evince for Hurricanes Erin and Dean;

seven out of twelve specifications produce negative, significant coefficients on the triple interactions of interest.

Parallel Trends. The key assumption undergirding causal inference, and hence, internal validity, in a DD specification is parallel trends in outcomes between the treatment and control groups, prior to treatment. Figure A3 shows parallel price trends between the high risk treatment group (the middle price line) and the control group (the bottom price line). The vertical lines correspond to the storm dates. The second vertical line from the right denotes Katrina. Between 2000 and when the storm struck in late August, 2005, the price trends are roughly parallel. After Hurricane Katrina struck, Figure A3 displays clear evidence of a growing spread between prices for parcels in high risk zones and the control group. This supports the robust finding of a premium on high risk parcels after the storm. Conversely, comparing the top line (high risk parcels in CRS towns) with the middle line suggests prices for CRS, high risk parcels converged toward prices for high risk parcels. Both patterns support our empirical results: premiums for high risk properties after Hurricane Katrina, relative to control, and risk discounts for CRS, high risk parcels, relative to other high risk parcels.

The right-most vertical line corresponds to the month during which Hurricanes Dean and Erin struck. There is clearly a violation of the pre-trends assumption in this case as the control group parcel prices are rising more rapidly than the high risk group. The third line from the right denotes Hurricane Charley. Here, the parallel trend assumption appears to hold which bolsters the causal interpretation of the storm's effect on housing prices. For the cluster of storms that struck during 2002, again, the parallel trends assumption holds. Finally, the parallel trend assumption does not hold for Hurricane Allison (left-hand most vertical line), especially comparing the high risk parcel prices and those for the control group.

Alternative Mechanisms. This section explores mechanisms that may explain the apparent risk discount associated non-local storms and CRS participation. Specifically targeted are mechanisms correlated with CRS participation that could plausibly induce the negative coefficient on the triple interaction term. These alternative explanations include: the role of second-home owners and non-residents in the coastal housing market, unobservable risk in CRS relative to non-CRS towns, local flooding events occurring after tropical cyclones, and alternative definitions of CRS participation.[21]

We first consider the role of second homeowners. On the supply-side, second homeowners may have more flexibility to sell than market participants selling their primary residence. Table A5 shows the breakdown of transactions according to residency status and CRS participation. The table reveals that second homeowners often possess property in towns with high CRS participation and in high risk zones. That the econometric models report parcels in CRS towns and high-risk zones sell at a discount following storms may reflect non-residents' greater liquidity. While this may still expose market participants' attitudes toward (or perceptions of) risk, it would obfuscate our ability to cleanly identify a causal effect of the CRS.

[21] While not presented in the paper, we do test two alternative definitions of CRS participation. Neither yield significant results. The first considers the CRS-treated group as any municipality that ever participated in CRS. The potential problem with this definition is the inclusion of municipalities that are not actively participating in CRS. During our sample period, the total number of credits for ever-participating towns may decrease. The results from the alternative, more permissive, definition of CRS participation are presented in the appendix. Similarly we do not find a significant relationship between non-local flood shocks, CRS participation, and prices when we define CRS participation as towns that register Series 300 activities. The same problem described for CRS participation applies here. To correct for these measurement problems, we define our CRS treatment group as those municipalities that increased their participation in CRS 300 level activities in the prior year. With this definition, we do find a consistent, significant relationship between non-local flooding events, CRS participation, and prices. These results are discussed below and presented in the appendix.

We use linear probability models to test this mechanism. The first specification employs the entire population of properties (not just homes that sold) and is shown in (10).

$$(9) \quad S_{iym} = \varphi_0 + \varphi_1 CRS_{ty} + \varphi_2 Zone_i + \varphi_3\left(CRS_{ty} * Zone_i\right) + \varphi_4 Post_{ym} + \varphi_5 Nonresident_{iym} + \varphi_6\left(Nonresident_{iym} * Post_{ym}\right) + \varphi_7 char_{tym} + FE_y + FE_m + FE_t + FE_{cy} + \varepsilon_{iym}$$

where S_{iym} is an indicator of whether parcel (i) is sold in month-year (ym). The fixed effects, *CRS,* and *Zone* are defined as in the previous specifications. The index, $char_{tym}$, contains controls for the conditions in the town-month-year during which parcel (i) sold including: the average parcel price, average number of sales, if there are more sales than average in month (ym), number of new units being built, total new value being built, and the level of $PM_{2.5}$ air pollution. *Post* indicates whether year-month (ym) is in the 12-month window after Hurricane Katrina. *Nonresident* is an indicator of whether the homeowner lists an address outside of the town containing parcel (i) as their primary residence. This is the covariate of interest.

Table A6 reports the results from this regression. Parcels are more likely to be sold in a month during the post-Katrina period and if the parcel is in a high participating CRS town. However, properties owned by non-residents are less likely to be sold after the storm. Also noteworthy is the negative and marginally significant coefficient on the interaction term between CRS and the high risk flood zone. This suggests that some portion of the risk discount reported in Tables 6, 7, and A4 is due to illiquidity in such periods.

The second specification limits the data to parcels that sold. The dependent variable is an indicator for non-resident sellers. The covariate of

interest is the post storm indicator. As above, we approach this semi-parametrically, testing definitions of Post from two to twelve months following Hurricane Katrina. The models control for age and living space of the home along with market conditions like average price, average number of sales, new builds information, and include year, month, county-year, and town fixed effects. Table A7 reports that sales occurring after Katrina are slightly more likely to involve non-residents. The effect is small (about 1.3 percent) and is marginally significant. However, Table A7 also demonstrates that sales are roughly 15 percent less likely to involve a non-resident if the parcel is in a CRS town and is located in a high flood risk zone. These results suggest that a supply-side role of non-residents is particularly unlikely to be driving the effect of CRS participation on high risk parcel prices.

Although Table A7 shows that non-residents are not selling significantly more after Katrina, it is possible non-residents are playing a role on the demand side of the market.[22] First we test whether non-residents are more likely to buy properties after Hurricane Katrina by adopting the specifications used in the supply-side regressions (above) with the distinction that the dependent variable is an indicator for non-resident buyers. Table A8 shows that the coefficients of interest are not significant for any of the six post-storm periods.

First, the coefficients for the post-Katrina periods are all negative and not statistically significant. Hence, we detect no evidence that non-resident buyers are disproportionately more likely to purchase parcels after Katrina and therefore induce the risk discount reported in Tables 6 and 7. Table A8 does suggest that

[22] The story for why non-resident's buying would drive a decrease in prices is not as straightforward as the non-resident's financial mobility selling mechanism. We propose an income effect of sorts. If non-resident second home owners are wealthier on average, it is possible that non-residents are more likely to have all cash offers than primary residents, which might be accepted by sellers at a lower price. With this mechanism an increase in non-residents (correlated with CRS) drives down prices, not information about risk.

parcels in high risk zones increases the likelihood that non-residents purchase the parcel. Conversely, parcels in CRS towns and high risk zones are between 5 and 7% less likely to be purchased by non-residents.

Table A9 displays the results from a regression through which we test whether non-resident buyers are especially likely to purchase parcels from primary residents. The coefficient indicating non-resident buyer is negative and significant ($p < 0.01$). Hence, when a transaction features non-resident buyers, such a transaction is nearly 20% less likely to involve primary resident sellers. More important to our test of mechanism is the interaction term between non-resident and post-storm. This interaction term is not significant in all specifications.

We then consider whether homeowners in CRS communities perceive higher risk and that drives both the participation in CRS and the price drops after Hurricane Katrina. To test this, we compare sales across buyer type. If it is perceived risks driving the results we would expect transactions with buyers from outside of the CRS towns to have a significantly smaller price drop than transaction with buyers who are also from the CRS town. To run this test we limit our data to only sales in CRS high public awareness activity towns. We use the regression models in (11) and (12) for all sales and for repeated sales, respectively.

$$
\begin{aligned}
(10) \quad \log(p_{iym}) = {} & \alpha_0 + \alpha_1 Outside\ Buyer_{iym} + \alpha_2 Zone_i + \\
& \alpha_3(Outside\ Buyer_{iym} * Zone_i) + \alpha_4 Post_{ym} + \\
& \alpha_5(Zone_i * Post_{ym}) + \alpha_6(Outside\ Buyer_{iym} * \\
& Post_{ym}) + \alpha_7(Outside\ Buyer_{iym} * Zone_i * Post_{ym}) + \\
& \alpha_8 char_{iym} + \alpha_9 char_{tym} + FE_y + FE_m + FE_t + \\
& FE_{cy} + \epsilon_{iym}
\end{aligned}
$$

$$(11)\quad log(p_{iym}) = \beta_0 + \beta_1 Outside\ Buyer_{iym} + \beta_2 (Outside\ Buyer_{iym} * Zone_i) + \beta_3 Post_{ym} + \beta_4 (Zone_i * Post_{ym}) + \beta_5 (Outside\ Buyer_i * Post_{ym}) + \beta_6 (Outside\ Buyer_{iym} * Zone_i * Post_{ym}) + \beta_7 char_{iym} + \beta_8 char_{tym} + FE_y + FE_m + FE_i + FE_{cy} + \epsilon_{iym}$$

We present these results in Tables A10 and A11. We find no significant difference between these two types of transactions. Specifically the coefficient on the interaction term between the non-resident buyer-by-high risk zone-by-post storm is insignificant across both specifications (repeated cross-sections and repeat sales) and all delineations of periods after Hurricane Katrina.

Another threat to our identification strategy is that parcels in CRS towns are at higher risk, in ways that are unobservable to the econometrician, than parcels in the same FEMA risk zones, but not situated in CRS towns. This concern stems from the fact that municipalities select into CRS. One might be concerned that towns facing particularly high risk would select into CRS. Stated alternatively: do parcels within CRS towns in the high risk flood zones face more risk than parcels in non-CRS towns in those same zones? And, crucially, are they more likely to respond to a storm? To explore this alternative mechanism, we examine whether the average claim values are higher in CRS towns than in non-CRS towns. While we expect to find a positive relationship between CRS and claims (as CRS is correlated with FEMA's high risk zones and it provides information about flood insurance), a positive relationship between CRS towns with high levels of public awareness activities and average claims would provide evidence that the mechanism may be stemming from higher risk and not better information. Average claim is defined as the total dollar amount of claims divided

by the number of claims made in each town in each year. We use the following model:

$$(12)\quad Avg\ Clm_{tym} = \alpha_0 + \alpha_1 CRS_{ty} + FE_y + FE_m + FE_t + \epsilon_{tym}$$

Table A12 reports a negative relationship between CRS and average claims. Upon inclusion of municipality FE, the relationship becomes insignificant. While we cannot conclusively rule out this mechanism, table A12 suggests that unobservable differences in risk within FEMA's risk zones across CRS participation is not driving our results.

We then consider whether local flood shocks might be driving our results. Table A13 in the appendix reports the results from the triple difference repeat sales model with a control for whether the sale occurred during a month in which a flood disaster had been declared in New Jersey. [23] The coefficient of interest on the local flood control, Disaster Declared, is negative, small in magnitude (less than 1 percent) and only marginally significant in one of the six specifications. In contrast, the triple interaction coefficient is significant in all specifications, negative, and its magnitude is between 6 and 9.5 percent. Thus, local flooding disasters do not appear to drive our results.

Tables A14, A15, and A16 in the appendix report the results from models that employs alternate definitions of CRS participation. (These are all triple difference, repeat sales models.) Table A14 reclassifies CRS participation to include all class 8 towns. The central results are unchanged. The coefficient on the triple interaction is negative and significant in four of the six specifications, ranging between 11 and 14 percent. Table A15 reclassifies CRS participation to

[23] We also considered municipality-month-year claims data as a control for other flood experiences and these data do not change our results.

include towns who increase their level of participation with any of the 300 information-based activities. One of the six coefficients is significant and negative. However, the effect estimate is larger than in the main paper at 19.5 percent. In our final definition presented in Table A16 we consider all activities that might affect information.[24] In this definition we include activities related to emergency response and warnings and limit our CRS treatment group to those who participate in the top ten percent of these activities. Using this definition does not change our results.

D. Monetary Impact of Flood Risk and Welfare Implications

These results imply a large loss for the homeowners in CRS- participating municipalities after a flood shock. We calculate the approximate revenue lost to the homeowners that sold properties during the post storm periods and we calculate the potential revenue loss to all homes that are in a CRS-treated town and at high flood risk, but were not sold immediately following the storm. We use the fitted coefficients from the repeat sales models. We emphasize that this is an approximate calculation. Table 7 reports that the decrease in price during the 12 month window after the storm is 15.7%. There are 1,902 homes that are in municipalities that meet our definition of CRS public awareness activities, in a high risk zone, and that sold during this window. The average price of homes sold during the pre-Hurricane Katrina window that were in high risk zones and in CRS municipalities is about $460,000. Thus, in total sellers lost almost $140 million dollars (15.7% x 460,000 x 1,902). In addition, there are approximately 30,000 homes that are high risk and in CRS towns during the post Katrina window. While, only a small subset of these homes sold during the window, if our results are externally valid, the value of all of these homes would be effected. The total potential revenue loss is then over $2 billion. This calculation is limited to

[24] The relevant activities are presented in Table A17.

the homes in informed regions whose values would have been effected during the post storm window.

It is possible that this adjustment to property values is welfare improving. As the financial crisis of 2008 made clear, real estate market corrections, and the resulting income effects, can affect the entire economy. The wide reaching effect of real estate market corrections is not unique to the financial crisis of 2008. The literature has shown that asset bubbles often lead to crashes, and that these crashes can spill over into other areas of the economy (Brunnermeier and Oehmke 2012). Further, information frictions can cause bubbles to arise, in turn contributing to future crashes (Brunnermeier and Oehmke 2012). The CRS infuses risk-relevant information into the market. The non-local shock provides updated news. Hence, the price drop we detect after the storm shock may just be a price correction in the market. This could be welfare improving if such a price correction prevents a future correction of greater magnitude with adverse effects on other real and financial markets. There is empirical evidence that increasing the number of well-informed homeowners can be welfare improving. Bakkensen and Barrage (2017) find that increasing the number of realists (homeowners who know the true value of flood risk) minimizes the reduction in home price due to sea level rise.

We also consider whether CRS improves insurance levels. The initial policy goal of the National Flood Insurance Program was to force homeowners to internalize risk through insurance. However, even though it was mandated for homes with federally backed mortgages, there has not been enforcement and take up has been slow (Michel-Kerjan, 2010). [25] One possible explanation is that people were uninformed about risk to properly insure (Chivers and Flores, 2012). While estimating the optimum level of insurance is beyond the scope of this paper, prior literature has demonstrated that homes in high risk areas are still

[25] While take up has increased over the years, as of 2008 at least half of the homes in high risk zones are uninsured.

underinsured against their future risks (Michel-Kerjan, 2010). Thus, an increase in policy holders in municipalities with high risk areas should be welfare improving. Municipalities that participate in CRS have seen an increase in insurance policy holders. In Table A18 we present results from a regression of CRS public awareness participation on policy counts. We also include specifications with year, month fixed effects and year, month, municipality fixed effects. In all three of our specifications, participating in CRS, is positively and significantly related with the number of policy holders.

A final welfare consideration of CRS is whether participation in these activities mitigates flood damages. Our regressions presented in Table A12 show participation in CRS is associated with a decrease in the average claim. While this is provocative evidence that CRS may be effective in mitigating damages, further research is required to thoroughly explore this question.

V. Conclusion

The present study offers three key innovations over prior papers that use hedonic models to examine how coastal real estate markets capitalize flood risks. First, we develop a novel identification strategy to isolate the market response to flood risk distinctly from damage due to realized flooding. Second, we demonstrate the importance of information specifically about flood risk in triggering market responses. Third, we show that current flood risk, over and above risk discounts associated with long-run outcomes, affects real estate prices.

We find that parcels located in high risk coastal flooding zones in New Jersey tend to sell at a premium, relative to other parcels, and prices tend to be higher after Hurricane Katrina. In a triple difference specification, the interaction term between flood risk, post-Katrina, and CRS participation suggests that information

provided to market participants in such towns differentially depresses prices after a non-local shocks such as Hurricane Katrina.

These findings stand to inform policymakers in at least two ways. First, environmental regulators charged with conducting climate change related risk assessments now have compelling evidence that major coastal flooding events impact markets distant from the locus of the event. In the present case, direct property damage from Katrina is estimated at $125 billion (Knabb et al., 2005). Non-local risk discounts *only in the coastal New Jersey CRS towns* are estimated herein at $2 billion. Our findings argue strongly for further research in other coastal real estate markets to ascertain whether such effects evince there as well.

Second, analysts at the NFIP may benefit from our findings. Specifically, we demonstrate a causal effect of CRS information campaigns on the sensitivity of participants to flood risk. Something about the CRS information treatment heightens risk awareness. Though not causal we also present evidence that CRS increases insurance uptake and decreases average claim values. We leave the larger question of whether CRS interventions avert asset bubbles by infusing risk relevant information to future work.

We conclude with the following consideration. An underlying premise of hedonic theory is the notion that prices embody markets in equilibrium (Freeman, 1979). As such, at any given time, market prices in coastal locales reflect some balance between the stream of benefits generated by access or proximity to the coast and flood risk. Our analysis centers on unanticipated events that provide market participants with information related to flood risks. Hence, we study market adjustment processes. This tack is especially relevant now as the distribution of flood risk changes because of climate change. The extent to which markets can rapidly and efficiently capitalize changing risks will bolster the

ability of revealed preference techniques to capture risk valuations. The information provision embodied in the CRS appears to facilitate this process. This, in turn, will strengthen society's capacity to design efficient environmental policies targeting climate change risks.

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VI. Tables

Table 1 – Descriptive Statistics

Variable	Mean	SD	Min	Max
Total CRS Points	333.09	595.35	0	2288
CRS Class	9.43	1.05	6	10
CRS Pub Maps Par	0.16	0.37	0	1
Total CRS 300s Points	106.30	181.14	0	571
Total CRS 400s Points	108.99	220.11	0	1121
Total CRS 500s Points	71.96	149.03	0	554
Total CRS 600s Points	32.68	62.66	0	272
Zone High	0.27	0.44	0	1
CRS X Zone	0.11	0.31	0	1
Year Built	1974.22	25.15	1606	2012
Living Space (sq footage)	1378.41	1053.92	0	200400
Verified Sales Price ($)	326980.47	353859.31	400	44000000
Number of Monthly Sales	50.29	44.64	1	245
Total New Builds (Number of Units)	12.73	18.93	0	305
Total Value New Builds ($)	1535743.50	2085704.75	0	23094524
PM 2.5 Pollution (μg/m3)	11.48	4.45	2.95	38.07
Total Residents	15707.17	11143.02	150	42203
Primary Residents	10469.14	9097.26	67	32186
Secondary Residents	5238.03	3941.44	34	14546
Percent Non-Resident	0.37	0.23	0.07	0.89

Table 2 – Cross Tabulation and Correlations

Panel A: Summary Cross Tab of Houses

	CRS	Non-CRS	Total
Zone High Risk	30,384	42,361	72,745
Zone Low Risk	12,977	186,860	199,837
Total	43,361	229,221	272,582

Panel B: Correlation Between Price and CRS, High Risk

	Zone High Risk	CRS	CRS x Zone
Log Price	0.1328	0.2211	0.2326

Note: Non-CRS refers to any municipality that does not meet our definition of CRS participation.

Table 3 – Sale Price Response to Hurricane Katrina – All Sales, No Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
Zone High Risk	0.185	0.185	0.185	0.185	0.185	0.185
	(0.00429)	(0.00429)	(0.00429)	(0.00429)	(0.00429)	(0.00429)
Post # Months	0.441	0.436	0.423	0.432	0.443	0.442
	(0.0106)	(0.00789)	(0.00658)	(0.00559)	(0.00505)	(0.00471)
Zone X Post # Months	0.144	0.148	0.121	0.113	0.0914	0.0963
	(0.0269)	(0.0197)	(0.0166)	(0.0141)	(0.0126)	(0.0118)
Year FE	N	N	N	N	N	N
Month FE	N	N	N	N	N	N
County-Year FE	N	N	N	N	N	N
Municipality FE	N	N	N	N	N	N
House FE	N	N	N	N	N	N
Observations	178,844	182,491	186,126	190,609	194,668	198,060
R-squared	0.023	0.030	0.035	0.043	0.049	0.054

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table 4 - Sale Price Response to Hurricane Katrina – All Sales, Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.0511	0.0495	0.0439	0.0368	0.0338	0.0280
	(0.0243)	(0.0241)	(0.0237)	(0.0231)	(0.0227)	(0.0224)
Zone High Risk	0.234	0.232	0.231	0.231	0.230	0.229
	(0.00804)	(0.00788)	(0.00779)	(0.00757)	(0.00740)	(0.00724)
CRS x Zone	-0.129	-0.131	-0.131	-0.130	-0.131	-0.128
	(0.0127)	(0.0126)	(0.0124)	(0.0122)	(0.0120)	(0.0118)
Post Months	-0.0188	-0.0144	-0.0105	-0.0100	-0.00751	-0.00726
	(0.00864)	(0.00714)	(0.00709)	(0.00708)	(0.00711)	(0.00710)
Zone X Post # Months	0.117	0.102	0.0876	0.0869	0.0791	0.0787
	(0.0194)	(0.0144)	(0.0123)	(0.0106)	(0.00965)	(0.00901)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	156,561	159,887	163,157	167,290	171,118	174,301
R-squared	0.630	0.632	0.632	0.634	0.636	0.638

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table 5 – Sale Price Response to Hurricane Katrina - Repeated Sales, Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.106	0.102	0.0919	0.0880	0.0841	0.0813
	(0.0290)	(0.0286)	(0.0281)	(0.0267)	(0.0263)	(0.0259)
CRS x Zone	-0.0619	-0.0595	-0.0496	-0.0470	-0.0472	-0.0466
	(0.0315)	(0.0312)	(0.0306)	(0.0294)	(0.0290)	(0.0287)
Post Months	-0.0305	-0.0289	-0.0280	-0.0249	-0.0232	-0.0208
	(0.0105)	(0.00899)	(0.00874)	(0.00859)	(0.00840)	(0.00828)
Zone X Post # Months	0.0909	0.0906	0.0967	0.0945	0.0994	0.0978
	(0.0222)	(0.0184)	(0.0150)	(0.0133)	(0.0118)	(0.0110)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table 6 - Sale Price Response to Hurricane Katrina – Information, All Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.0508	0.0472	0.0399	0.0316	0.0278	0.0219
	(0.0243)	(0.0240)	(0.0236)	(0.0231)	(0.0226)	(0.0223)
Zone High Risk	0.234	0.232	0.230	0.229	0.228	0.226
	(0.00798)	(0.00782)	(0.00771)	(0.00747)	(0.00731)	(0.00716)
CRS x Zone	-0.129	-0.128	-0.124	-0.120	-0.119	-0.116
	(0.0128)	(0.0127)	(0.0126)	(0.0125)	(0.0124)	(0.0123)
Post Months	-0.0190	-0.0165	-0.0132	-0.0123	-0.00969	-0.00904
	(0.00862)	(0.00709)	(0.00704)	(0.00703)	(0.00705)	(0.00703)
Zone X Post Months	0.123	0.117	0.108	0.113	0.105	0.103
	(0.0245)	(0.0177)	(0.0151)	(0.0132)	(0.0122)	(0.0113)
CRS X Post # Months	0.00514	0.0396	0.0464	0.0382	0.0382	0.0329
	(0.0458)	(0.0337)	(0.0273)	(0.0226)	(0.0204)	(0.0192)
CRS X Zone X Post Mos	-0.0221	-0.0776	-0.0970	-0.105	-0.106	-0.0986
	(0.0582)	(0.0425)	(0.0355)	(0.0299)	(0.0266)	(0.0248)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	156,561	159,887	163,157	167,290	171,118	174,301
R-squared	0.630	0.632	0.632	0.634	0.636	0.638

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table 7 - Sale Price Response to Hurricane Katrina – Repeated Sales, Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.106	0.101	0.0894	0.0826	0.0779	0.0734
	(0.0290)	(0.0288)	(0.0283)	(0.0271)	(0.0267)	(0.0264)
CRS x Zone	-0.0609	-0.0570	-0.0442	-0.0373	-0.0354	-0.0324
	(0.0315)	(0.0313)	(0.0307)	(0.0297)	(0.0293)	(0.0291)
Post # Months	-0.0288	-0.0310	-0.0306	-0.0280	-0.0263	-0.0243
	(0.0106)	(0.00914)	(0.00889)	(0.00873)	(0.00853)	(0.00840)
Zone X Post # Months	0.124	0.114	0.122	0.123	0.127	0.126
	(0.0299)	(0.0232)	(0.0184)	(0.0159)	(0.0139)	(0.0128)
CRS X Post # Mos	-0.0376	0.0424	0.0517	0.0648	0.0697	0.0807
	(0.0416)	(0.0610)	(0.0472)	(0.0396)	(0.0347)	(0.0322)
CRS X Zone X Post # Mos	-0.0575	-0.105	-0.116	-0.140	-0.146	-0.157
	(0.0560)	(0.0679)	(0.0533)	(0.0452)	(0.0397)	(0.0370)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

VII. Figures

Figure 1 – Google Trends in New Jersey: Hurricane Katrina Search Term

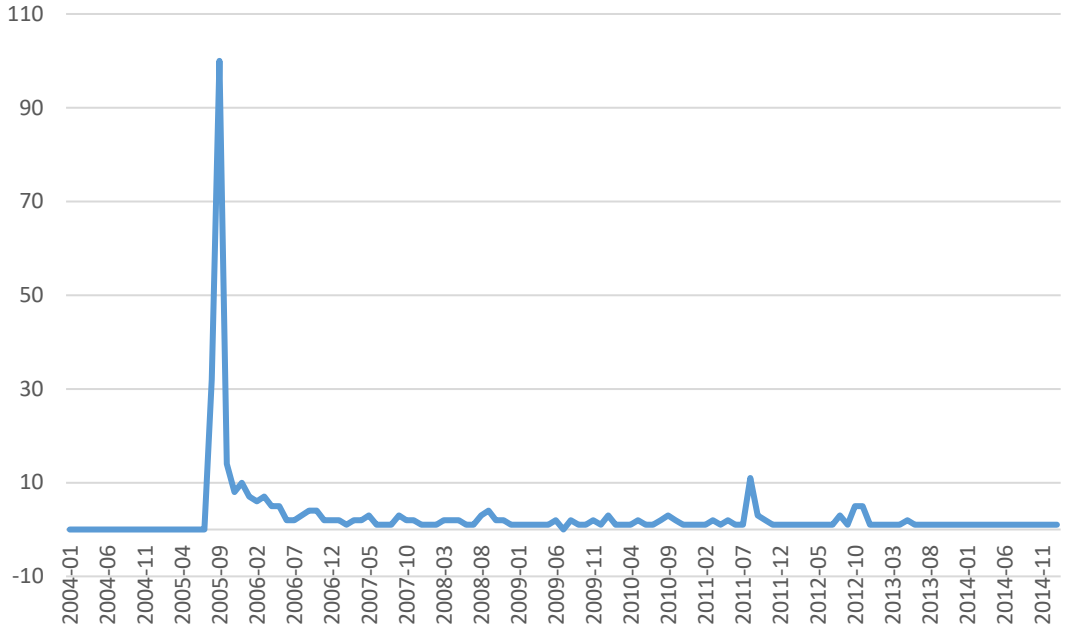


Figure 2 – Relationship between Coastal Amenity and Price

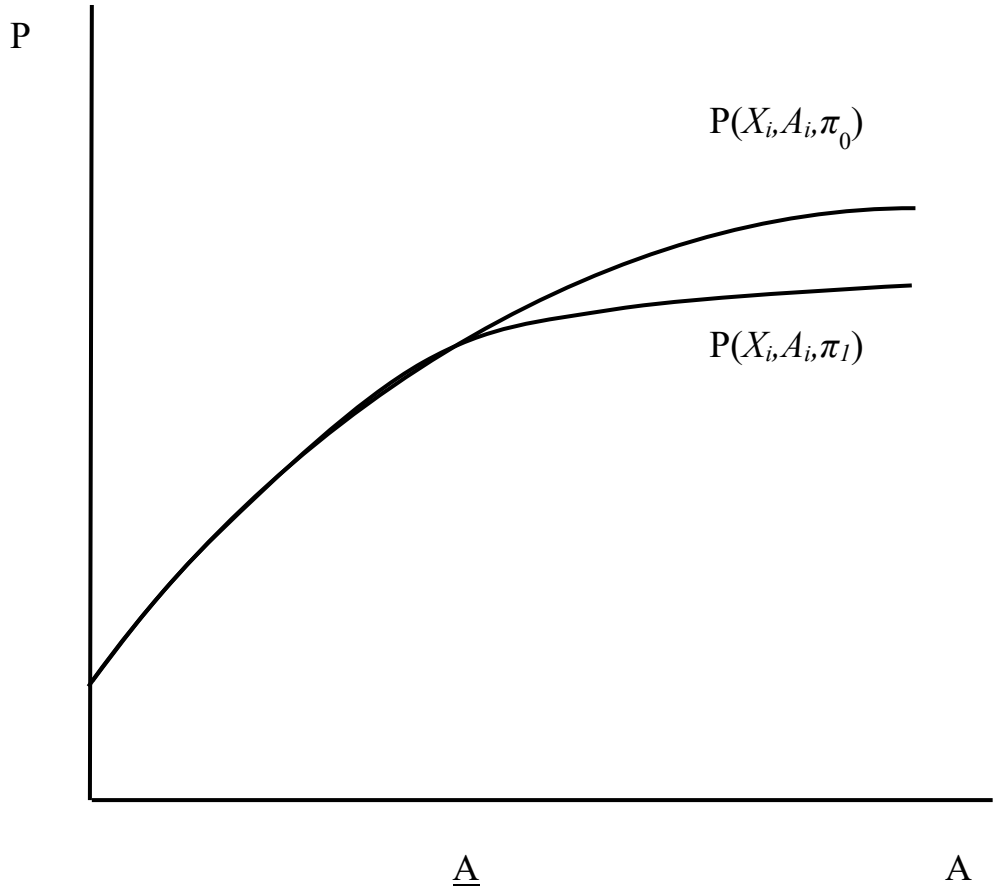


Figure 3 - Map of Flood Risk in New Jersey Counties

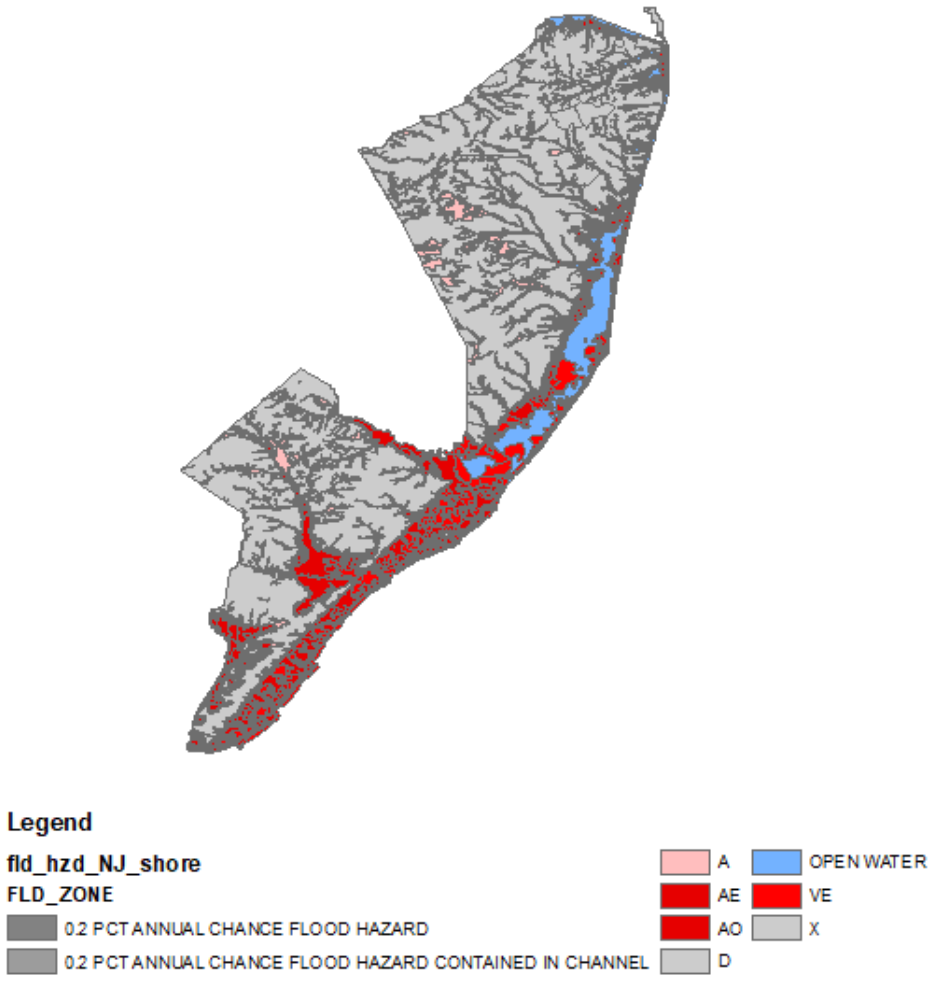
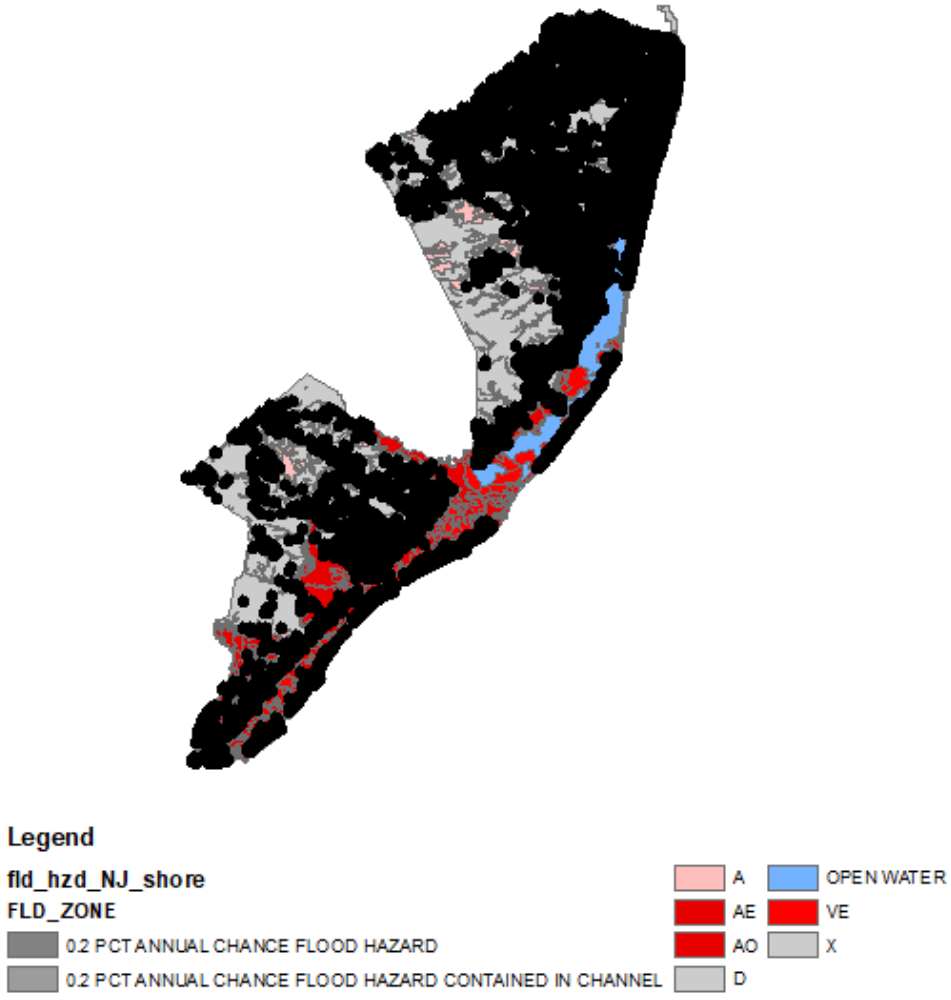


Figure 4 - Map of Flood Risk in New Jersey Counties and Housing Sales



For Online Publication

APPENDIX

I. Appendix Tables

Table A1– Description of Public Awareness CRS Activities

Activity Number	Description
320	Map Information
330	Public Outreach Projects
340	Hazard Disclosure
350	Flood Protection Information
360	Flood Protection Assistance
410	Floodplain Mapping
440	Flood Data Maintenance

Table A2 – Table Setup for Post and Post Interaction Variables

Variables:	(1) Column Definition	(2) Column Definition	(3) Column Definition	(4) Column Definition	(5) Column Definition	(6) Column Definition
Post # Months	Post 2 Months	Post 4 Months	Post 6 Months	Post 8 Months	Post 10 Months	Post 12 Months
Zone X Post # Months	Zone X Post 2 Months	Zone X Post 4 Months	Zone X Post 6 Months	Zone X Post 8 Months	Zone X Post 10 Months	Zone X Post 12 Months
CRS X Post # Mos	CRS X Post 2 Months	CRS X Post 4 Months	CRS X Post 6 Months	CRS X Post 8 Months	CRS X Post 10 Months	CRS X Post 12 Months
CRS X Zone X Post # Mos	CRS X Zone X Post 2 Mos	CRS X Zone X Post 4 Mos	CRS X Zone X Post 6 Mos	CRS X Zone X Post 8 Mos	CRS X Zone X Post 10 Mos	CRS X Zone X Post 12 Mos
Secondary Res Buy X Post # Mo	Secondary Res Buy X Post 2 Mo	Secondary Res Buy X Post 4 Mo	Secondary Res Buy X Post 6 Mo	Secondary Res Buy X Post 8 Mo	Secondary Res Buy X Post 10 Mo	Secondary Res Buy X Post 12 Mo
OB X Post # Mos	OB X Post 2 Months	OB X Post 4 Months	OB X Post 6 Months	OB X Post 8 Months	OB X Post 10 Months	OB X Post 12 Months
OB X Zone X Post # Mo	OB X Zone X Post 2 Mo	OB X Zone X Post 4 Mo	OB X Zone X Post 6 Mo	OB X Zone X Post 8 Mo	OB X Zone X Post 10 Mo	OB X Zone X Post 12 Mo

Table A3 - Sales Price Regression, Pre and Post Period, Repeated Sales, Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Maps Par.	-0.00929	-0.00963	-0.0106	-0.0115	-0.0119	-0.0121
	(0.00989)	(0.00990)	(0.00990)	(0.00991)	(0.00992)	(0.00992)
CRS x Zone	0.0635	0.0635	0.0643	0.0661	0.0665	0.0670
	(0.0144)	(0.0144)	(0.0144)	(0.0144)	(0.0144)	(0.0144)
Age	-0.00399	-0.00399	-0.00399	-0.00400	-0.00400	-0.00399
	(0.000294)	(0.000294)	(0.000295)	(0.000295)	(0.000295)	(0.000295)
Living Space	4.52e-05	4.52e-05	4.53e-05	4.53e-05	4.53e-05	4.53e-05
	(2.14e-05)	(2.14e-05)	(2.14e-05)	(2.14e-05)	(2.14e-05)	(2.14e-05)
Mo Sales/Avg Mo Sales	-0.0100	-0.00972	-0.00989	-0.00987	-0.00893	-0.00838
	(0.00471)	(0.00471)	(0.00471)	(0.00470)	(0.00470)	(0.00470)
Mo Sales	0.000629	0.000633	0.000623	0.000614	0.000616	0.000622
	(6.70e-05)	(6.70e-05)	(6.69e-05)	(6.68e-05)	(6.68e-05)	(6.68e-05)
Lag Air Pollution	0.000905	0.000863	0.000857	0.000909	0.000950	0.000936
	(0.000293)	(0.000292)	(0.000292)	(0.000292)	(0.000292)	(0.000292)
Air Pollution	-0.000168	-0.000161	-0.000122	-0.000145	-5.26e-05	-6.36e-05
	(0.000289)	(0.000287)	(0.000287)	(0.000287)	(0.000287)	(0.000287)
Total New Builds	0.000144	0.000145	0.000140	0.000140	0.000142	0.000141
	(6.00e-05)	(6.00e-05)	(6.00e-05)	(6.00e-05)	(6.00e-05)	(6.00e-05)
Total Value New Builds	0.00370	0.00355	0.00346	0.00345	0.00340	0.00339
	(0.00107)	(0.00107)	(0.00107)	(0.00107)	(0.00107)	(0.00107)
Post # Months	-0.000420	0.0116	0.0134	0.0252	0.0286	0.0271
	(0.00789)	(0.00605)	(0.00507)	(0.00462)	(0.00462)	(0.00489)
Zone X Post # Months	0.0622	0.0539	0.0711	0.0744	0.0742	0.0721
	(0.0254)	(0.0180)	(0.0147)	(0.0130)	(0.0117)	(0.0109)
CRS X Post # Mos	-0.0432	0.0235	0.0439	0.0527	0.0536	0.0619
	(0.0305)	(0.0372)	(0.0293)	(0.0262)	(0.0238)	(0.0222)
CRS X Zone X Post # Mos	-0.0109	-0.0417	-0.0723	-0.0933	-0.0940	-0.105
	(0.0426)	(0.0435)	(0.0348)	(0.0311)	(0.0282)	(0.0263)
Constant	11.68	11.68	11.68	11.68	11.68	11.68
	(0.0306)	(0.0306)	(0.0306)	(0.0306)	(0.0306)	(0.0306)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	86,543	86,543	86,543	86,543	86,543	86,543
R-squared	0.969	0.969	0.969	0.969	0.969	0.969

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A4– Summary of Results from Analyses of All Storms

Storm	Description	All Sales	Repeated Sales
Allison	Tropical Storm Allison landed in Texas in June of 2001 and led to 30,000 homeless after storm flooding.	0	0
Multiple 2002	Several hurricanes and tropical storms that hit several regions of the US and the Caribbean in September 2002.	5	0
Charley	Hurricane Charley hit the US in August of 2004 and caused over 15 billion dollars in damages. Primarily in Florida.	6	4
Katrina	Hurricane Katrina hit the US in August of 2005. It was the costliest cyclone to ever hit the US and cost more than 100 billion in damages.	5	4
Multiple 2007	Hurricane Dean and Tropical storm Erin both occurred in August of 2007 and both caused wide spread damages. Hurricane Dean's destruction was felt primarily in the gulf coast and Mexico, where as Erin caused flooding in Texas and Oklahoma.	4	3

Notes: This table presents the number of negative and significant coefficients on the interaction term, CRS x Zone x Post # Months, across all six specifications for each storm and each dataset. In column "All Sales" we denote the number for the regressions that utilize all sales and in the column "Repeated Sales" we denote the number for the specifications that considered only repeated sales.

Table A5 - Cross Tabulation Across Resident Groups

		CRS	Non-CRS	Total
Primary Resident:				
	Zone High Risk	7,966	16,977	24,943
	Zone Low Risk	4,064	113,085	117,149
	Total	12,030	130,062	142,092
Non Resident:				
	Zone High Risk	22,418	25,384	47,802
	Zone Low Risk	8,913	73,775	82,688
	Total	31,331	99,159	130,490
All Residents				
	Zone High Risk	30,384	42,361	72,745
	Zone Low Risk	12,977	186,860	199,837
	Total	43,361	229,221	272,582

Note: Non-CRS refers to any municipality that does not meet our definition of CRS participation.

Table A6 – Probability a Home is Sold by Non-Resident After Hurricane Katrina

Variables:	(1) Sold
Post 12 Months	0.0126
	(0.000218)
Non-resident Sell	-0.986
	(0.000216)
Non-resident Sell x Post 12 Months	-0.0126
	(0.000216)
CRS Public Info and Maps Par.	0.000515
	(0.000107)
Zone High Risk	0.000259
	(2.28e-05)
CRS x Zone	-0.000551
	(6.32e-05)
Average Sales	0.0847
	(0.00129)
Number Sales Over Average	0.00184
	(2.78e-05)
Average Price	-0.000279
	(3.86e-05)
Average Lag Pollution	-2.29e-06
	(2.12e-06)
Average Pollution	2.67e-06
	(2.12e-06)
Total New Units	-3.34e-07
	(4.50e-07)
Total New Value	-6.67e-06
	(6.84e-06)
Constant	0.250
	(0.0112)
Year FE	Y
Month FE	Y
County-Year FE	Y
Municipality FE	Y
House FE	N
Observations	43,989,189
R-squared	0.542

Robust standard errors in parentheses. Dependent variable is listed in column header

Table A7 – Probability of Non-Resident Sale After Hurricane Katrina

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Non-Resident Sale	Non-Resident Sale	Non-Resident Sale	Non-Resident Sale	Non-Resident Sale	Non-Resident Sale
Zone High Risk	0.0951	0.0937	0.0949	0.0959	0.0950	0.0952
	(0.00552)	(0.00544)	(0.00537)	(0.00527)	(0.00520)	(0.00514)
CRS Public Info and Maps Par.	0.0968	0.101	0.0853	0.0755	0.0602	0.0633
	(0.0362)	(0.0354)	(0.0340)	(0.0320)	(0.0304)	(0.0292)
CRS x Zone	-0.138	-0.136	-0.133	-0.134	-0.133	-0.133
	(0.0101)	(0.00992)	(0.00980)	(0.00963)	(0.00950)	(0.00938)
Age	1.01e-05	1.33e-05	8.96e-06	9.34e-06	1.66e-05	1.32e-05
	(6.38e-05)	(6.27e-05)	(6.18e-05)	(6.07e-05)	(5.98e-05)	(5.91e-05)
Living Space	-4.44e-05	-4.48e-05	-4.50e-05	-4.53e-05	-4.53e-05	-4.54e-05
	(1.07e-05)	(1.05e-05)	(1.03e-05)	(1.01e-05)	(9.78e-06)	(9.61e-06)
Average Price	-0.0587	-0.0609	-0.0586	-0.0596	-0.0608	-0.0679
	(0.0151)	(0.0148)	(0.0146)	(0.0142)	(0.0140)	(0.0137)
Average Month Sales	-0.00347	-0.00203	-0.00190	-0.000972	-7.16e-05	0.000801
	(0.00215)	(0.00207)	(0.00196)	(0.00185)	(0.00176)	(0.00170)
Total Mo Sales/Avg Mo Sales	-0.00293	-0.00146	-0.000970	0.000219	0.00260	0.00356
	(0.00486)	(0.00481)	(0.00477)	(0.00469)	(0.00460)	(0.00453)
Lag Air Pollution	-7.95e-05	-8.35e-05	-0.000151	-0.000198	-0.000150	-0.000231
	(0.000490)	(0.000489)	(0.000484)	(0.000478)	(0.000474)	(0.000470)
Air Pollution	-0.000120	-0.000129	-0.000132	-8.20e-05	-8.08e-05	-0.000125
	(0.000488)	(0.000481)	(0.000479)	(0.000477)	(0.000472)	(0.000467)
Total New Builds	-9.16e-05	-9.86e-05	-9.59e-05	-8.15e-05	-7.88e-05	-7.32e-05
	(9.67e-05)	(9.62e-05)	(9.55e-05)	(9.47e-05)	(9.37e-05)	(9.28e-05)
Total Value New Builds	0.000674	0.000781	0.00124	0.00106	0.000988	0.000517
	(0.00155)	(0.00153)	(0.00151)	(0.00148)	(0.00143)	(0.00141)
Percentage Homes Zone High	-0.315	-0.133	-0.0921	-0.0247	0.145	0.241
	(0.249)	(0.239)	(0.223)	(0.207)	(0.198)	(0.192)
Percentage Homes Non-resident	-0.109	-0.236	-0.246	-0.335	-0.522	-0.589
	(0.251)	(0.241)	(0.231)	(0.221)	(0.211)	(0.204)
Total Population	5.95e-06	1.25e-06	9.09e-07	-2.42e-06	-5.50e-06	-8.14e-06
	(7.77e-06)	(7.46e-06)	(7.09e-06)	(6.70e-06)	(6.34e-06)	(6.11e-06)
Post # Month	0.0121	0.0128	0.0129	0.0130	0.0131	0.0131
	(0.00881)	(0.00759)	(0.00759)	(0.00759)	(0.00759)	(0.00759)
Constant	1.263	1.301	1.262	1.295	1.340	1.434
	(0.182)	(0.178)	(0.174)	(0.170)	(0.166)	(0.162)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	110,624	113,950	117,220	121,353	125,181	128,364
R-squared	0.217	0.217	0.216	0.216	0.215	0.215

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A8 – Probability of Non-Resident Purchase After Hurricane Katrina

Variables:	(1) Non-Resident Buy	(2) Non-Resident Buy	(3) Non-Resident Buy	(4) Non-Resident Buy	(5) Non-Resident Buy	(6) Non-Resident Buy
Zone High Risk	0.0993	0.0985	0.0980	0.0985	0.0984	0.0979
	(0.00516)	(0.00508)	(0.00502)	(0.00494)	(0.00488)	(0.00481)
CRS Public Info and Maps Par.	0.0852	0.0851	0.0671	0.0353	0.0382	0.0362
	(0.0353)	(0.0342)	(0.0331)	(0.0316)	(0.0297)	(0.0284)
CRS x Zone	-0.0724	-0.0703	-0.0667	-0.0621	-0.0605	-0.0597
	(0.0101)	(0.00994)	(0.00982)	(0.00967)	(0.00954)	(0.00943)
Age	0.000147	0.000152	0.000151	0.000165	0.000175	0.000183
	(5.81e-05)	(5.71e-05)	(5.62e-05)	(5.53e-05)	(5.44e-05)	(5.37e-05)
Living Space	-3.51e-05	-3.53e-05	-3.55e-05	-3.59e-05	-3.56e-05	-3.53e-05
	(7.17e-06)	(7.04e-06)	(6.92e-06)	(6.81e-06)	(6.57e-06)	(6.38e-06)
Average Price	-0.0451	-0.0458	-0.0466	-0.0448	-0.0461	-0.0427
	(0.0127)	(0.0125)	(0.0122)	(0.0120)	(0.0117)	(0.0114)
Average Month Sales	0.00113	0.00229	0.00208	0.00300	0.00337	0.00317
	(0.00185)	(0.00178)	(0.00170)	(0.00160)	(0.00152)	(0.00147)
Total Mo Sales/Avg Mo Sales	-0.00199	-0.000327	0.000150	0.00113	0.00219	0.00319
	(0.00425)	(0.00421)	(0.00417)	(0.00411)	(0.00403)	(0.00398)
Lag Air Pollution	-0.00142	-0.00147	-0.00147	-0.00145	-0.00139	-0.00134
	(0.000435)	(0.000434)	(0.000429)	(0.000423)	(0.000420)	(0.000416)
Air Pollution	-0.000495	-0.000535	-0.000514	-0.000548	-0.000514	-0.000535
	(0.000431)	(0.000425)	(0.000424)	(0.000422)	(0.000417)	(0.000412)
Total New Builds	1.90e-05	-3.87e-06	-4.95e-06	-5.28e-06	-3.04e-05	-2.56e-05
	(8.09e-05)	(8.06e-05)	(7.99e-05)	(7.91e-05)	(7.84e-05)	(7.77e-05)
Total Value New Builds	-0.000607	-0.000505	-0.000332	0.000241	0.00118	0.000128
	(0.00142)	(0.00140)	(0.00137)	(0.00134)	(0.00129)	(0.00127)
Percentage Homes Zone High	-0.0789	0.104	0.215	0.392	0.532	0.573
	(0.217)	(0.208)	(0.195)	(0.182)	(0.174)	(0.171)
Percentage Homes Non-resident	0.285	0.0689	-0.0407	-0.268	-0.384	-0.366
	(0.242)	(0.233)	(0.224)	(0.214)	(0.203)	(0.199)
Total Population	-9.85e-06	-1.40e-05	-1.35e-05	-1.72e-05	-1.82e-05	-1.72e-05
	(6.65e-06)	(6.39e-06)	(6.10e-06)	(5.75e-06)	(5.44e-06)	(5.27e-06)
Post # Month	-0.00191	-0.00222	-0.00222	-0.00235	-0.00224	-0.00220
	(0.00789)	(0.00682)	(0.00682)	(0.00682)	(0.00681)	(0.00681)
Constant	0.647	0.695	0.724	0.737	0.757	0.720
	(0.157)	(0.154)	(0.150)	(0.147)	(0.143)	(0.140)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	110,624	113,950	117,220	121,353	125,181	128,364
R-squared	0.348	0.347	0.346	0.346	0.346	0.345

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A9 - Probability Primary Seller's Home is Bought by Non-Resident

Variables:	(1) Primary Sell	(2) Primary Sell	(3) Primary Sell	(4) Primary Sell	(5) Primary Sell	(6) Primary Sell
Zone High Risk	-0.0767	-0.0754	-0.0767	-0.0777	-0.0768	-0.0772
	(0.00532)	(0.00524)	(0.00518)	(0.00508)	(0.00502)	(0.00496)
CRS Public Info and Maps Par.	-0.0810	-0.0854	-0.0728	-0.0689	-0.0531	-0.0568
	(0.0363)	(0.0355)	(0.0343)	(0.0320)	(0.0304)	(0.0291)
CRS x Zone	0.125	0.123	0.121	0.123	0.121	0.122
	(0.00998)	(0.00984)	(0.00973)	(0.00955)	(0.00943)	(0.00930)
Age	1.74e-05	1.53e-05	1.90e-05	2.11e-05	1.53e-05	1.96e-05
	(6.27e-05)	(6.16e-05)	(6.07e-05)	(5.96e-05)	(5.87e-05)	(5.81e-05)
Living Space	3.78e-05	3.82e-05	3.85e-05	3.86e-05	3.87e-05	3.89e-05
	(9.41e-06)	(9.26e-06)	(9.11e-06)	(8.89e-06)	(8.65e-06)	(8.51e-06)
Average Price	0.0503	0.0526	0.0500	0.0512	0.0521	0.0597
	(0.0144)	(0.0141)	(0.0139)	(0.0136)	(0.0133)	(0.0130)
Average Month Sales	0.00370	0.00252	0.00229	0.00150	0.000577	-0.000470
	(0.00212)	(0.00204)	(0.00195)	(0.00185)	(0.00175)	(0.00170)
Total Mo Sales/Avg Mo Sales	0.00256	0.00140	0.000998	-7.62e-06	-0.00219	-0.00294
	(0.00481)	(0.00476)	(0.00472)	(0.00464)	(0.00455)	(0.00449)
Lag Air Pollution	-0.000185	-0.000192	-0.000121	-7.01e-05	-0.000107	-1.63e-05
	(0.000483)	(0.000482)	(0.000477)	(0.000471)	(0.000467)	(0.000463)
Air Pollution	2.75e-05	2.91e-05	3.66e-05	-1.92e-05	-1.37e-05	2.60e-05
	(0.000483)	(0.000476)	(0.000474)	(0.000472)	(0.000467)	(0.000462)
Total New Builds	9.54e-05	9.85e-05	9.50e-05	8.03e-05	7.25e-05	6.70e-05
	(9.51e-05)	(9.45e-05)	(9.39e-05)	(9.31e-05)	(9.21e-05)	(9.13e-05)
Total Value New Builds	-0.000787	-0.000873	-0.00130	-0.00102	-0.000782	-0.000505
	(0.00152)	(0.00150)	(0.00148)	(0.00145)	(0.00140)	(0.00138)
Percentage Homes Zone High	0.302	0.158	0.132	0.0952	-0.0554	-0.154
	(0.246)	(0.237)	(0.221)	(0.206)	(0.197)	(0.191)
Percentage Homes Non-resident	0.160	0.239	0.239	0.290	0.467	0.557
	(0.245)	(0.236)	(0.227)	(0.218)	(0.208)	(0.203)
Total Population	-7.85e-06	-4.13e-06	-3.41e-06	-6.55e-07	2.58e-06	5.94e-06
	(7.65e-06)	(7.37e-06)	(7.02e-06)	(6.66e-06)	(6.32e-06)	(6.11e-06)
Secondary Resident Buy	-0.186	-0.186	-0.185	-0.185	-0.185	-0.185
	(0.00394)	(0.00392)	(0.00390)	(0.00388)	(0.00385)	(0.00384)
Post # Month	-0.0116	-0.0113	-0.0133	-0.0139	-0.0153	-0.0170
	(0.0104)	(0.00867)	(0.00838)	(0.00818)	(0.00807)	(0.00800)
Secondary Res Buy X Post # Mo	-0.00224	-0.00534	2.46e-05	0.00121	0.00470	0.00956
	(0.0149)	(0.0114)	(0.00987)	(0.00868)	(0.00794)	(0.00746)
Constant	-0.143	-0.171	-0.128	-0.160	-0.202	-0.304
	(0.174)	(0.170)	(0.167)	(0.163)	(0.159)	(0.156)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	110,624	113,950	117,220	121,353	125,181	128,364
R-squared	0.238	0.238	0.237	0.237	0.236	0.236

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A10 - All Sales Buyer Type Results

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
Outside Buyer (OB)	0.0558	0.0536	0.0531	0.0544	0.0541	0.0548
	(0.0145)	(0.0144)	(0.0144)	(0.0144)	(0.0144)	(0.0144)
Zone High Risk	0.152	0.148	0.147	0.150	0.150	0.151
	(0.0154)	(0.0153)	(0.0152)	(0.0152)	(0.0151)	(0.0151)
OB x Zone	-0.0352	-0.0333	-0.0325	-0.0341	-0.0341	-0.0351
	(0.0169)	(0.0168)	(0.0168)	(0.0168)	(0.0168)	(0.0168)
Age	-0.00234	-0.00234	-0.00228	-0.00231	-0.00231	-0.00228
	(0.000156)	(0.000153)	(0.000152)	(0.000149)	(0.000147)	(0.000146)
Living Space	0.000452	0.000449	0.000450	0.000451	0.000451	0.000451
	(7.75e-06)	(7.60e-06)	(7.50e-06)	(7.37e-06)	(7.26e-06)	(7.16e-06)
Total Mo Sales/Avg Mo Sales	-0.0434	-0.0498	-0.0581	-0.0606	-0.0663	-0.0687
	(0.0162)	(0.0160)	(0.0159)	(0.0157)	(0.0153)	(0.0151)
Total Mo Sales	0.00184	0.00200	0.00230	0.00243	0.00264	0.00277
	(0.000396)	(0.000387)	(0.000391)	(0.000380)	(0.000369)	(0.000363)
Lag Air Pollution	-0.00246	-0.00255	-0.00234	-0.00229	-0.00227	-0.00239
	(0.00109)	(0.00109)	(0.00108)	(0.00107)	(0.00106)	(0.00106)
Air Pollution	-0.00150	-0.00171	-0.00167	-0.00173	-0.00157	-0.00184
	(0.00113)	(0.00112)	(0.00112)	(0.00111)	(0.00110)	(0.00110)
Total New Builds	-0.000480	-0.000421	-0.000275	-0.000133	-2.45e-05	-2.14e-05
	(0.000321)	(0.000319)	(0.000314)	(0.000311)	(0.000308)	(0.000307)
Total Value New Builds	0.0272	0.0268	0.0251	0.0246	0.0247	0.0230
	(0.00519)	(0.00516)	(0.00493)	(0.00492)	(0.00486)	(0.00482)
Post # Months	-0.0251	-0.0730	-0.0540	-0.0527	-0.0443	-0.0284
	(0.0527)	(0.0387)	(0.0342)	(0.0324)	(0.0303)	(0.0301)
Zone X Post # Months	0.0724	0.0489	0.0690	0.0407	0.0450	0.0328
	(0.0681)	(0.0501)	(0.0428)	(0.0382)	(0.0339)	(0.0317)
OB X Post # Mos	-0.0653	0.0511	0.0622	0.0587	0.0550	0.0233
	(0.0793)	(0.0600)	(0.0479)	(0.0406)	(0.0359)	(0.0342)
OB X Zone X Post # Mos	0.0808	0.00806	-0.0653	-0.0264	-0.0405	-0.0101
	(0.0959)	(0.0728)	(0.0604)	(0.0514)	(0.0456)	(0.0426)
Constant	10.82	10.83	10.85	10.85	10.85	10.87
	(0.0785)	(0.0779)	(0.0755)	(0.0751)	(0.0744)	(0.0737)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	20,982	21,411	21,866	22,392	22,838	23,221
R-squared	0.667	0.669	0.665	0.666	0.666	0.666

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A11 - Repeated Sales Buyer Type Results

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
Outside Buyer (OB)	-0.0218	-0.0260	-0.0290	-0.0292	-0.0371	-0.0405
	(0.0309)	(0.0297)	(0.0286)	(0.0278)	(0.0269)	(0.0262)
OB x Zone	0.0221	0.0267	0.0310	0.0342	0.0450	0.0498
	(0.0352)	(0.0338)	(0.0326)	(0.0317)	(0.0307)	(0.0300)
Age	-0.00141	-0.00934	-0.00885	-0.0139	-0.0135	-0.00988
	(0.0218)	(0.0224)	(0.0222)	(0.0218)	(0.0208)	(0.0202)
Living Space	0.000314	0.000463	0.000522	0.000783	0.000719	0.000767
	(0.000496)	(0.000497)	(0.000491)	(0.000478)	(0.000457)	(0.000432)
Total Mo Sales/Avg Mo Sales	-0.00334	-0.00337	-0.00348	-0.00357	-0.00359	-0.00360
	(0.000555)	(0.000542)	(0.000534)	(0.000521)	(0.000507)	(0.000491)
Total Mo Sales	0.000104	0.000115	0.000121	0.000131	0.000134	0.000139
	(2.45e-05)	(2.44e-05)	(2.31e-05)	(2.33e-05)	(2.26e-05)	(2.24e-05)
Lag Air Pollution	0.00154	0.00158	0.00181	0.00203	0.00207	0.00228
	(0.00155)	(0.00151)	(0.00148)	(0.00147)	(0.00144)	(0.00143)
Air Pollution	-0.000809	-0.000791	-0.000479	-0.000772	-0.000825	-0.00116
	(0.00156)	(0.00152)	(0.00150)	(0.00147)	(0.00145)	(0.00142)
Total New Builds	-0.000430	-0.000392	-0.000373	-0.000220	-0.000161	-0.000188
	(0.000412)	(0.000408)	(0.000398)	(0.000390)	(0.000381)	(0.000375)
Total Value New Builds	0.00799	0.00697	0.00699	0.00812	0.00765	0.00798
	(0.00653)	(0.00639)	(0.00617)	(0.00618)	(0.00609)	(0.00605)
Post Months	-0.0777	-0.0645	-0.0804	-0.0542	-0.0582	-0.0505
	(0.0885)	(0.0751)	(0.0661)	(0.0620)	(0.0575)	(0.0540)
Zone X Post # Months	0.0387	0.0328	0.0538	0.0150	0.0283	0.0181
	(0.117)	(0.103)	(0.0855)	(0.0734)	(0.0664)	(0.0609)
OB X Post # Months	-0.0329	0.0167	0.0306	0.0115	0.0174	0.0192
	(0.0969)	(0.118)	(0.0911)	(0.0835)	(0.0728)	(0.0668)
OB X Zone X Post # Mos	0.0286	-0.0466	-0.0601	-0.0336	-0.0506	-0.0487
	(0.128)	(0.128)	(0.105)	(0.0949)	(0.0827)	(0.0764)
Constant	11.82	11.79	11.79	11.76	11.76	11.75
	(0.102)	(0.108)	(0.0983)	(0.0977)	(0.0949)	(0.0934)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	7,814	7,929	8,044	8,177	8,283	8,372
R-squared	0.987	0.986	0.985	0.985	0.984	0.984

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A12 – Regression Results: CRS on Average Claims

	(1)	(2)	(3)	(4)
Variables:	Avg Claims	Avg Claims	Avg Claims	Avg Claims
CRS Public Info and Maps Par	-2,712	-3,802	-3,498	-1,235
	(980.0)	(897.9)	(868.6)	(1,624)
Constant	11,003	6,782	5,892	20,232
	(600.5)	(1,769)	(2,297)	(6,553)
Year FE	N	Y	Y	Y
Month FE	N	N	Y	Y
Municipality FE	N	N	N	Y
Observations	2,200	2,200	2,200	2,200
R-squared	0.003	0.210	0.268	0.364

Robust standard errors in parentheses. Dependent variable is listed in the column header.

Table A13- Sale Price Response to Hurricane Katrina – Rep Sales, Flood Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Maps Par	0.106	0.101	0.0894	0.0826	0.0778	0.0734
	(0.0290)	(0.0288)	(0.0283)	(0.0271)	(0.0267)	(0.0264)
CRS x Zone	-0.0611	-0.0572	-0.0443	-0.0374	-0.0355	-0.0325
	(0.0315)	(0.0313)	(0.0308)	(0.0297)	(0.0293)	(0.0291)
Age	-0.00140	-0.00137	-0.00137	-0.00141	-0.00146	-0.00147
	(0.000383)	(0.000372)	(0.000366)	(0.000358)	(0.000350)	(0.000341)
Living Space	1.50e-05	1.63e-05	1.73e-05	1.80e-05	1.94e-05	2.05e-05
	(1.14e-05)	(1.22e-05)	(1.27e-05)	(1.29e-05)	(1.37e-05)	(1.43e-05)
Total Mo Sales/Avg Mo Sales	-0.00160	-0.00442	-0.00561	-0.00449	-0.00322	-0.00217
	(0.00828)	(0.00813)	(0.00783)	(0.00759)	(0.00730)	(0.00710)
Total Mo Sales	-0.000154	-7.19e-05	-2.16e-05	3.42e-06	6.22e-05	0.000134
	(0.000129)	(0.000125)	(0.000120)	(0.000116)	(0.000112)	(0.000108)
Lag Air Pollution	0.000345	0.000387	0.000480	0.000449	0.000541	0.000549
	(0.000405)	(0.000396)	(0.000385)	(0.000378)	(0.000365)	(0.000361)
Air Pollution	-0.000497	-0.000512	-0.000513	-0.000543	-0.000421	-0.000484
	(0.000401)	(0.000389)	(0.000383)	(0.000378)	(0.000372)	(0.000365)
Total New Builds	-7.70e-05	-8.53e-05	-0.000112	-0.000118	-9.88e-05	-0.000112
	(9.39e-05)	(9.22e-05)	(9.03e-05)	(8.84e-05)	(8.42e-05)	(8.32e-05)
Total Value New Builds	0.00424	0.00452	0.00554	0.00596	0.00591	0.00600
	(0.00201)	(0.00195)	(0.00190)	(0.00182)	(0.00169)	(0.00165)
Disaster Declared	-0.00668	-0.00578	-0.00612	-0.00446	-0.0111	-0.00425
	(0.00676)	(0.00669)	(0.00655)	(0.00637)	(0.00576)	(0.00560)
Post # Months	-0.0301	-0.0319	-0.0315	-0.0287	-0.0281	-0.0250
	(0.0108)	(0.00923)	(0.00898)	(0.00881)	(0.00860)	(0.00847)
Zone X Post # Months	0.124	0.114	0.122	0.123	0.127	0.126
	(0.0298)	(0.0232)	(0.0184)	(0.0159)	(0.0139)	(0.0128)
CRS X Post # Mos	-0.0379	0.0423	0.0517	0.0647	0.0695	0.0807
	(0.0416)	(0.0610)	(0.0472)	(0.0396)	(0.0347)	(0.0322)
CRS X Zone X Post # Mos	-0.0575	-0.105	-0.117	-0.140	-0.145	-0.157
	(0.0559)	(0.0679)	(0.0533)	(0.0452)	(0.0397)	(0.0370)
Constant	11.61	11.57	11.56	11.57	11.57	11.56
	(0.0319)	(0.0351)	(0.0320)	(0.0305)	(0.0293)	(0.0289)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A14 - Regression Results with CRS Class 8 or Above, Repeated Sales, Controls, Info

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Class 8 or Above	0.194	0.189	0.192	0.189	0.190	0.189
	(0.0365)	(0.0366)	(0.0360)	(0.0346)	(0.0343)	(0.0340)
CRS x Zone	-0.0261	-0.0215	-0.0249	-0.0253	-0.0287	-0.0292
	(0.0398)	(0.0397)	(0.0389)	(0.0375)	(0.0371)	(0.0368)
Age	-0.00127	-0.00124	-0.00125	-0.00130	-0.00136	-0.00137
	(0.000371)	(0.000362)	(0.000358)	(0.000351)	(0.000344)	(0.000337)
Living Space	1.55e-05	1.68e-05	1.79e-05	1.86e-05	2.00e-05	2.11e-05
	(1.18e-05)	(1.26e-05)	(1.32e-05)	(1.34e-05)	(1.41e-05)	(1.47e-05)
Mo Sales/Avg Mo Sales	-0.00171	-0.00421	-0.00491	-0.00397	-0.00237	-0.00149
	(0.00821)	(0.00810)	(0.00782)	(0.00760)	(0.00732)	(0.00712)
Mo Sales	-8.87e-05	-1.45e-05	2.99e-05	5.18e-05	0.000115	0.000177
	(0.000128)	(0.000124)	(0.000119)	(0.000116)	(0.000112)	(0.000108)
Lag Air Pollution	0.000267	0.000309	0.000408	0.000393	0.000455	0.000499
	(0.000402)	(0.000393)	(0.000382)	(0.000375)	(0.000363)	(0.000359)
Air Pollution	-0.000511	-0.000530	-0.000532	-0.000562	-0.000428	-0.000505
	(0.000399)	(0.000387)	(0.000381)	(0.000376)	(0.000370)	(0.000363)
Total New Builds	-6.85e-05	-7.33e-05	-0.000102	-0.000111	-9.06e-05	-0.000105
	(9.37e-05)	(9.20e-05)	(9.02e-05)	(8.82e-05)	(8.42e-05)	(8.31e-05)
Total Value New Builds	0.00351	0.00382	0.00481	0.00533	0.00522	0.00542
	(0.00200)	(0.00193)	(0.00189)	(0.00181)	(0.00169)	(0.00164)
Post # Months	-0.0262	-0.0271	-0.0274	-0.0246	-0.0230	-0.0210
	(0.0106)	(0.00910)	(0.00883)	(0.00866)	(0.00847)	(0.00835)
Zone X Post # Months	0.121	0.115	0.121	0.121	0.124	0.122
	(0.0301)	(0.0235)	(0.0188)	(0.0167)	(0.0145)	(0.0134)
CRS X Post # Mos	-0.0730	0.00633	0.0430	0.0427	0.0531	0.0623
	(0.0348)	(0.0480)	(0.0418)	(0.0320)	(0.0300)	(0.0290)
CRS X Zone X Post # Mos	-0.0164	-0.0823	-0.115	-0.118	-0.126	-0.134
	(0.0509)	(0.0566)	(0.0482)	(0.0383)	(0.0354)	(0.0340)
Constant	11.60	11.56	11.55	11.56	11.56	11.55
	(0.0318)	(0.0349)	(0.0318)	(0.0304)	(0.0292)	(0.0289)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A15 - Regression Results Using Inc Total 300s, Repeated Sales, Controls, Info

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Inc Tot 300s	0.0217	0.0202	0.0210	0.0229	0.0242	0.0219
	(0.0137)	(0.0133)	(0.0131)	(0.0126)	(0.0122)	(0.0121)
CRS x Zone	0.0159	0.0153	0.0141	0.0136	0.0112	0.0125
	(0.0170)	(0.0165)	(0.0163)	(0.0158)	(0.0154)	(0.0153)
Age	-0.00125	-0.00123	-0.00123	-0.00126	-0.00132	-0.00132
	(0.000370)	(0.000362)	(0.000357)	(0.000349)	(0.000342)	(0.000334)
Living Space	1.51e-05	1.63e-05	1.74e-05	1.81e-05	1.95e-05	2.07e-05
	(1.15e-05)	(1.23e-05)	(1.28e-05)	(1.30e-05)	(1.38e-05)	(1.45e-05)
Mo Sales/Avg Mo Sales	-0.00317	-0.00555	-0.00614	-0.00469	-0.00285	-0.00158
	(0.00826)	(0.00814)	(0.00786)	(0.00761)	(0.00733)	(0.00713)
Mo Sales	-0.000134	-5.70e-05	-1.43e-05	2.59e-06	6.12e-05	0.000116
	(0.000128)	(0.000125)	(0.000120)	(0.000116)	(0.000112)	(0.000109)
Lag Air Pollution	0.000283	0.000335	0.000434	0.000420	0.000494	0.000542
	(0.000404)	(0.000395)	(0.000384)	(0.000376)	(0.000365)	(0.000361)
Air Pollution	-0.000439	-0.000476	-0.000484	-0.000511	-0.000380	-0.000468
	(0.000401)	(0.000389)	(0.000383)	(0.000378)	(0.000372)	(0.000365)
Total New Builds	-7.66e-05	-8.37e-05	-0.000110	-0.000116	-9.57e-05	-0.000112
	(9.41e-05)	(9.24e-05)	(9.04e-05)	(8.85e-05)	(8.43e-05)	(8.32e-05)
Total Value New Builds	0.00463	0.00497	0.00598	0.00640	0.00629	0.00649
	(0.00200)	(0.00194)	(0.00189)	(0.00182)	(0.00169)	(0.00164)
Post # Months	-0.0317	-0.0304	-0.0291	-0.0262	-0.0246	-0.0222
	(0.0105)	(0.00900)	(0.00875)	(0.00860)	(0.00841)	(0.00829)
Zone X Post # Months	0.0932	0.0955	0.102	0.101	0.106	0.105
	(0.0227)	(0.0186)	(0.0152)	(0.0134)	(0.0119)	(0.0111)
CRS X Post # Mos	0.0859	0.0892	-0.121	-0.0894	-0.0768	-0.0857
	(0.0424)	(0.0419)	(0.123)	(0.0988)	(0.0950)	(0.0856)
CRS X Zone X Post # Mos	-0.113	-0.197	0.0108	-0.0555	-0.0870	-0.0935
	(0.0884)	(0.0761)	(0.129)	(0.104)	(0.0998)	(0.0903)
Constant	11.60	11.57	11.56	11.57	11.56	11.56
	(0.0318)	(0.0350)	(0.0318)	(0.0304)	(0.0291)	(0.0287)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A16 - CRS All Pub High Definition, Repeated Sales, Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Actions High	-0.123	-0.126	-0.123	-0.124	-0.124	-0.134
	(0.0425)	(0.0419)	(0.0418)	(0.0411)	(0.0407)	(0.0402)
CRS x Zone	0.0575	0.0597	0.0566	0.0586	0.0563	0.0638
	(0.0439)	(0.0432)	(0.0431)	(0.0423)	(0.0419)	(0.0414)
Age	-0.00115	-0.00113	-0.00113	-0.00117	-0.00124	-0.00125
	(0.000367)	(0.000358)	(0.000353)	(0.000347)	(0.000340)	(0.000333)
Living Space	1.55e-05	1.67e-05	1.78e-05	1.86e-05	1.99e-05	2.11e-05
	(1.18e-05)	(1.26e-05)	(1.32e-05)	(1.34e-05)	(1.42e-05)	(1.48e-05)
Mo Sales/Avg Mo Sales	-0.00288	-0.00564	-0.00666	-0.00541	-0.00379	-0.00289
	(0.00829)	(0.00817)	(0.00788)	(0.00763)	(0.00735)	(0.00715)
Mo Sales	-9.56e-05	-1.69e-05	3.08e-05	5.20e-05	0.000115	0.000181
	(0.000129)	(0.000126)	(0.000120)	(0.000117)	(0.000112)	(0.000109)
Lag Air Pollution	0.000268	0.000308	0.000405	0.000383	0.000444	0.000492
	(0.000403)	(0.000394)	(0.000383)	(0.000376)	(0.000364)	(0.000360)
Air Pollution	-0.000503	-0.000529	-0.000534	-0.000562	-0.000431	-0.000509
	(0.000400)	(0.000389)	(0.000383)	(0.000377)	(0.000371)	(0.000364)
Total New Builds	-8.67e-05	-9.26e-05	-0.000117	-0.000122	-9.94e-05	-0.000114
	(9.40e-05)	(9.23e-05)	(9.03e-05)	(8.84e-05)	(8.43e-05)	(8.32e-05)
Total Value New Builds	0.00499	0.00527	0.00619	0.00662	0.00642	0.00663
	(0.00201)	(0.00195)	(0.00190)	(0.00182)	(0.00169)	(0.00165)
Post # Months	-0.0285	-0.0295	-0.0287	-0.0253	-0.0236	-0.0213
	(0.0106)	(0.00912)	(0.00889)	(0.00870)	(0.00852)	(0.00840)
Zone X Post # Months	0.123	0.112	0.121	0.118	0.121	0.118
	(0.0284)	(0.0222)	(0.0174)	(0.0151)	(0.0132)	(0.0122)
CRS X Post # Mos	-0.0551	0.0332	0.0516	0.0630	0.0729	0.0798
	(0.0374)	(0.0524)	(0.0526)	(0.0439)	(0.0414)	(0.0399)
CRS X Zone X Post # Mos	-0.0375	-0.0972	-0.129	-0.150	-0.154	-0.160
	(0.0526)	(0.0606)	(0.0583)	(0.0490)	(0.0458)	(0.0440)
Constant	11.60	11.57	11.56	11.57	11.57	11.56
	(0.0320)	(0.0350)	(0.0320)	(0.0306)	(0.0292)	(0.0289)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A17 - Activities in Alternative Definition of CRS

Activity Number	Description
320	Map Information
330	Public Outreach Projects
340	Hazard Disclosure
350	Flood Protection Information
360	Flood Protection Assistance
410	Floodplain Mapping
440	Flood Data Maintenance
510	Floodplain Management Planning
610	Flood Warning and Response
620	Flood Warning and Response - Levees
630	Flood Warning and Response - Dams

Table A18 – Regression Results: CRS on Policy Counts

Variables:	(1) Policy Count	(2) Policy Count	(3) Policy Count	(4) Policy Count
CRS Public Info and Maps Par	208.8	212.2	212.4	26.57
	(4.238)	(4.218)	(4.208)	(2.537)
Constant	60.95	61.34	48.96	-29.35
	(0.937)	(4.286)	(5.743)	(2.289)
Year FE	N	Y	Y	Y
Month FE	N	N	Y	Y
Municipality FE	N	N	N	Y
Observations	22,067	22,067	22,067	22,067
R-squared	0.196	0.199	0.203	0.936

Robust standard errors in parentheses. Dependent variable is listed in the column header.

Table A19 – Sale Price Response to Hurricane Allison – All Sales, No Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
Zone High Risk	0.149	0.149	0.149	0.149	0.149	0.149
	(0.00774)	(0.00774)	(0.00774)	(0.00774)	(0.00774)	(0.00774)
Post # Months	0.0824	0.0816	0.0808	0.0881	0.103	0.135
	(0.0111)	(0.00839)	(0.00748)	(0.00693)	(0.00639)	(0.00596)
Zone X Post # Months	-0.00809	-0.0222	0.0218	0.0305	0.0621	0.0381
	(0.0248)	(0.0187)	(0.0162)	(0.0146)	(0.0132)	(0.0125)
Constant	11.87	11.87	11.87	11.87	11.87	11.87
	(0.00377)	(0.00377)	(0.00377)	(0.00377)	(0.00377)	(0.00377)
Year FE	N	N	N	N	N	N
Month FE	N	N	N	N	N	N
County-Year FE	N	N	N	N	N	N
Municipality FE	N	N	N	N	N	N
House FE	N	N	N	N	N	N
Observations	50,441	55,175	59,258	63,370	69,334	75,065
R-squared	0.010	0.010	0.012	0.014	0.019	0.021

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A20 – Sale Price Response to Hurricane Allison – All Sales, Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	1.012	1.025	0.152	0.133	0.0710	0.0616
	(0.0454)	(0.0434)	(0.0527)	(0.0369)	(0.0320)	(0.0293)
Zone High Risk	0.216	0.216	0.219	0.220	0.222	0.220
	(0.00884)	(0.00866)	(0.00852)	(0.00842)	(0.00830)	(0.00818)
CRS x Zone	-0.0314	-0.0359	-0.0475	-0.0729	-0.0992	-0.0987
	(0.0289)	(0.0280)	(0.0261)	(0.0242)	(0.0224)	(0.0211)
Age	-0.00213	-0.00210	-0.00206	-0.00211	-0.00221	-0.00223
	(0.000160)	(0.000150)	(0.000143)	(0.000138)	(0.000132)	(0.000121)
Living Space	0.000428	0.000429	0.000429	0.000430	0.000428	0.000425
	(3.15e-05)	(2.90e-05)	(2.67e-05)	(2.49e-05)	(2.23e-05)	(2.01e-05)
Mo Sales/Avg Mo Sales	-0.00670	-0.00563	-0.00245	-0.00517	0.00734	0.00526
	(0.0122)	(0.0118)	(0.0114)	(0.0111)	(0.0102)	(0.00954)
Mo Sales	0.000348	0.000352	0.000311	0.000323	0.000197	0.000122
	(0.000192)	(0.000188)	(0.000180)	(0.000174)	(0.000166)	(0.000158)
Lag Air Pollution	-0.000774	-0.000687	-0.000532	-0.000561	4.89e-05	-9.44e-05
	(0.00108)	(0.000906)	(0.000899)	(0.000877)	(0.000821)	(0.000803)
Air Pollution	0.000291	-0.000741	-0.000587	-0.000482	5.82e-05	0.00121
	(0.00124)	(0.000947)	(0.000922)	(0.000917)	(0.000855)	(0.000412)
Total New Builds	-0.000132	-1.17e-06	-5.63e-05	-5.03e-06	0.000106	0.000152
	(0.000173)	(0.000160)	(0.000158)	(0.000152)	(0.000149)	(0.000147)
Total Value New Builds	0.00717	0.00506	0.00451	0.00267	0.00219	0.00297
	(0.00364)	(0.00340)	(0.00330)	(0.00319)	(0.00300)	(0.00289)
Post # Months	-0.00840	-0.00485	-0.00553	-0.00492	-0.00356	0.000317
	(0.0118)	(0.0111)	(0.0108)	(0.0106)	(0.0103)	(0.00983)
Zone X Post # Months	0.0272	0.0126	0.0230	0.0255	0.0443	0.0482
	(0.0181)	(0.0147)	(0.0126)	(0.0116)	(0.0104)	(0.00987)
Constant	10.88	10.91	10.90	10.91	10.90	10.88
	(0.0687)	(0.0639)	(0.0600)	(0.0565)	(0.0522)	(0.0493)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	40,418	44,375	47,900	51,331	56,665	61,708
R-squared	0.597	0.596	0.600	0.602	0.607	0.613

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A21 – Sale Price Response to Hurricane Allison – Repeated Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.			0.291	0.158	0.171	0.186
			(0.440)	(0.194)	(0.164)	(0.130)
CRS x Zone			-0.389	-0.141	-0.187	-0.191
			(0.469)	(0.202)	(0.169)	(0.135)
Age	-0.00369	-0.00160	-0.00236	-0.00302	-0.00317	-0.00329
	(0.00504)	(0.00426)	(0.00362)	(0.00334)	(0.00225)	(0.00175)
Living Space	6.53e-05	5.58e-05	7.37e-05	8.75e-05	9.31e-05	8.51e-05
	(0.000129)	(8.76e-05)	(7.81e-05)	(7.24e-05)	(5.53e-05)	(4.46e-05)
Mo Sales/Avg Mo Sales	0.000234	-0.00216	-0.00114	-0.00489	-0.00371	-0.0103
	(0.0771)	(0.0620)	(0.0545)	(0.0473)	(0.0383)	(0.0358)
Mo Sales	4.21e-06	-0.000104	-0.000270	-0.000197	-0.000151	-0.000149
	(0.00125)	(0.00104)	(0.000855)	(0.000724)	(0.000592)	(0.000521)
Lag Air Pollution	0.00195	0.000628	0.00163	0.000996	0.00255	0.00242
	(0.00664)	(0.00571)	(0.00485)	(0.00409)	(0.00351)	(0.00297)
Air Pollution	7.55e-05	-9.93e-05	-0.000536	-0.000830	2.73e-06	0.000755
	(0.00804)	(0.00508)	(0.00411)	(0.00348)	(0.00296)	(0.00132)
Total New Builds	-0.000233	0.000122	9.24e-05	-8.00e-05	5.12e-05	-1.22e-05
	(0.00100)	(0.00107)	(0.000902)	(0.000721)	(0.000635)	(0.000517)
Total Value New Builds	0.00145	0.00108	0.00379	0.00581	0.00435	0.00515
	(0.0200)	(0.0166)	(0.0145)	(0.0123)	(0.0100)	(0.00859)
Post # Months	0.00505	-0.00249	0.0244	0.0270	0.0342	0.0387
	(0.0871)	(0.0622)	(0.0525)	(0.0454)	(0.0388)	(0.0329)
Zone X Post # Months	0.00293	0.0277	0.0193	0.0303	0.0312	0.0474
	(0.0908)	(0.0618)	(0.0421)	(0.0347)	(0.0282)	(0.0243)
Constant	11.68	11.67	11.64	11.63	11.62	11.62
	(0.309)	(0.232)	(0.200)	(0.165)	(0.152)	(0.126)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	13,111	13,350	13,639	13,964	14,483	15,015
R-squared	0.998	0.997	0.997	0.996	0.995	0.994

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A22 – Sale Price Response to Hurricane Allison – All Sales, Controls, Information

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	1.017	1.032	0.162	0.123	0.0524	0.0458
	(0.0459)	(0.0443)	(0.0557)	(0.0405)	(0.0360)	(0.0338)
Zone High Risk	0.217	0.217	0.219	0.218	0.221	0.219
	(0.00888)	(0.00871)	(0.00861)	(0.00855)	(0.00849)	(0.00842)
CRS x Zone	-0.0375	-0.0422	-0.0548	-0.0593	-0.0796	-0.0842
	(0.0303)	(0.0299)	(0.0293)	(0.0287)	(0.0281)	(0.0278)
Age	-0.00213	-0.00210	-0.00206	-0.00211	-0.00221	-0.00223
	(0.000160)	(0.000150)	(0.000143)	(0.000138)	(0.000132)	(0.000121)
Living Space	0.000428	0.000429	0.000429	0.000430	0.000428	0.000425
	(3.16e-05)	(2.90e-05)	(2.67e-05)	(2.49e-05)	(2.23e-05)	(2.01e-05)
Mo Sales/Avg Mo Sales	-0.00652	-0.00614	-0.00285	-0.00494	0.00781	0.00548
	(0.0122)	(0.0118)	(0.0114)	(0.0111)	(0.0102)	(0.00953)
Mo Sales	0.000345	0.000349	0.000311	0.000325	0.000202	0.000127
	(0.000192)	(0.000188)	(0.000180)	(0.000174)	(0.000166)	(0.000158)
Lag Air Pollution	-0.000771	-0.000688	-0.000532	-0.000560	4.98e-05	-9.76e-05
	(0.00108)	(0.000906)	(0.000899)	(0.000877)	(0.000821)	(0.000803)
Air Pollution	0.000306	-0.000744	-0.000583	-0.000500	4.37e-05	0.00122
	(0.00124)	(0.000947)	(0.000922)	(0.000917)	(0.000855)	(0.000412)
Total New Builds	-0.000131	-2.08e-06	-5.69e-05	-3.40e-06	0.000106	0.000153
	(0.000173)	(0.000160)	(0.000158)	(0.000152)	(0.000149)	(0.000147)
Total Value New Builds	0.00718	0.00515	0.00457	0.00262	0.00210	0.00288
	(0.00364)	(0.00340)	(0.00330)	(0.00319)	(0.00300)	(0.00289)
Post # Months	-0.00734	-0.00379	-0.00473	-0.00596	-0.00491	-0.000544
	(0.0118)	(0.0111)	(0.0107)	(0.0106)	(0.0103)	(0.00982)
Zone X Post # Months	0.0207	0.0116	0.0217	0.0299	0.0481	0.0501
	(0.0199)	(0.0156)	(0.0138)	(0.0129)	(0.0117)	(0.0111)
CRS X Post # Mos	-0.0323	-0.0328	-0.0240	0.0251	0.0349	0.0256
	(0.0517)	(0.0440)	(0.0365)	(0.0320)	(0.0283)	(0.0268)
CRS X Zone X Post # Mos	0.0544	0.0313	0.0246	-0.0360	-0.0410	-0.0269
	(0.0641)	(0.0542)	(0.0443)	(0.0385)	(0.0341)	(0.0322)
Constant	10.88	10.91	10.90	10.92	10.90	10.88
	(0.0689)	(0.0641)	(0.0601)	(0.0566)	(0.0523)	(0.0494)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	40,418	44,375	47,900	51,331	56,665	61,708
R-squared	0.597	0.596	0.600	0.602	0.607	0.613

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A23 – Sale Price Response to Hurricane Allison – Repeated Sales, Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.			0.314	0.174	0.168	0.124
			(0.449)	(0.208)	(0.174)	(0.162)
CRS x Zone			-0.425	-0.161	-0.185	-0.129
			(0.482)	(0.221)	(0.182)	(0.171)
Age	-0.00417	-0.00161	-0.00234	-0.00301	-0.00316	-0.00329
	(0.00517)	(0.00426)	(0.00362)	(0.00334)	(0.00225)	(0.00175)
Living Space	8.15e-05	5.71e-05	7.42e-05	8.77e-05	9.31e-05	8.45e-05
	(0.000133)	(8.76e-05)	(7.80e-05)	(7.24e-05)	(5.55e-05)	(4.44e-05)
Mo Sales/Avg Mo Sales	-0.00461	-0.00317	-0.00132	-0.00521	-0.00367	-0.00977
	(0.0768)	(0.0621)	(0.0547)	(0.0475)	(0.0384)	(0.0358)
Mo Sales	-4.06e-05	-0.000108	-0.000283	-0.000200	-0.000150	-0.000135
	(0.00124)	(0.00104)	(0.000857)	(0.000724)	(0.000592)	(0.000521)
Lag Air Pollution	0.000989	0.000660	0.00154	0.000967	0.00254	0.00243
	(0.00672)	(0.00578)	(0.00488)	(0.00409)	(0.00352)	(0.00298)
Air Pollution	0.000718	-0.000168	-0.000495	-0.000823	7.42e-06	0.000816
	(0.00801)	(0.00512)	(0.00413)	(0.00350)	(0.00296)	(0.00132)
Total New Builds	-0.000226	0.000118	9.25e-05	-8.04e-05	5.12e-05	-1.34e-05
	(0.000993)	(0.00107)	(0.000904)	(0.000722)	(0.000635)	(0.000517)
Total Value New Builds	0.00251	0.00124	0.00394	0.00589	0.00433	0.00490
	(0.0196)	(0.0166)	(0.0145)	(0.0123)	(0.0101)	(0.00860)
Post # Months	0.00562	-0.00145	0.0246	0.0274	0.0341	0.0373
	(0.0869)	(0.0623)	(0.0526)	(0.0455)	(0.0390)	(0.0333)
Zone X Post # Months	-0.0351	0.0271	0.0141	0.0281	0.0311	0.0503
	(0.0985)	(0.0690)	(0.0468)	(0.0395)	(0.0312)	(0.0261)
CRS X Post # Mos	-0.236	-0.0362	-0.0224	-0.0162	0.00362	0.0636
	(0.204)	(0.150)	(0.105)	(0.0869)	(0.0644)	(0.101)
CRS X Zone X Post # Mos	0.391	0.0304	0.0410	0.0222	-0.00243	-0.0651
	(0.271)	(0.186)	(0.127)	(0.103)	(0.0775)	(0.110)
Constant	11.67	11.67	11.64	11.63	11.62	11.63
	(0.303)	(0.232)	(0.201)	(0.166)	(0.153)	(0.126)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	13,111	13,350	13,639	13,964	14,483	15,015
R-squared	0.998	0.997	0.997	0.996	0.995	0.994

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A24 – Sale Price Response to 2002 Hurricanes – All Sales, No Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
Zone High Risk	0.161	0.161	0.161	0.161	0.161	0.161
	(0.00587)	(0.00587)	(0.00587)	(0.00587)	(0.00587)	(0.00587)
Post # Months	0.178	0.207	0.215	0.251	0.284	0.304
	(0.0116)	(0.00889)	(0.00731)	(0.00626)	(0.00555)	(0.00511)
Zone X Post # Months	0.0670	0.0790	0.0997	0.0785	0.0325	0.0359
	(0.0282)	(0.0199)	(0.0160)	(0.0135)	(0.0123)	(0.0113)
Constant	11.95	11.95	11.95	11.95	11.95	11.95
	(0.00279)	(0.00279)	(0.00279)	(0.00279)	(0.00279)	(0.00279)
Year FE	N	N	N	N	N	N
Month FE	N	N	N	N	N	N
County-Year FE	N	N	N	N	N	N
Municipality FE	N	N	N	N	N	N
House FE	N	N	N	N	N	N
Observations	87,279	91,286	96,058	101,903	107,655	113,522
R-squared	0.014	0.020	0.026	0.034	0.040	0.048

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A25 – Sale Price Response to 2002 Hurricanes– All Sales, Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.0737	0.0720	0.0618	0.0486	0.0453	0.0375
	(0.0256)	(0.0247)	(0.0239)	(0.0230)	(0.0223)	(0.0218)
Zone High Risk	0.234	0.235	0.235	0.237	0.236	0.236
	(0.00686)	(0.00677)	(0.00668)	(0.00658)	(0.00651)	(0.00643)
CRS x Zone	-0.0705	-0.0909	-0.103	-0.113	-0.108	-0.118
	(0.0188)	(0.0181)	(0.0175)	(0.0166)	(0.0160)	(0.0154)
Age	-0.00212	-0.00218	-0.00220	-0.00226	-0.00227	-0.00232
	(0.000107)	(0.000103)	(9.91e-05)	(9.39e-05)	(8.94e-05)	(8.54e-05)
Living Space	0.000422	0.000419	0.000416	0.000413	0.000409	0.000407
	(1.69e-05)	(1.59e-05)	(1.50e-05)	(1.40e-05)	(1.31e-05)	(1.23e-05)
Mo Sales/Avg Mo Sales	0.000264	-0.00432	-0.00307	-0.00419	-0.00408	-0.00424
	(0.00883)	(0.00863)	(0.00844)	(0.00812)	(0.00775)	(0.00748)
Mo Sales	-2.80e-05	-7.50e-06	1.50e-05	-2.49e-05	-4.94e-05	-0.000169
	(0.000150)	(0.000143)	(0.000141)	(0.000135)	(0.000132)	(0.000129)
Lag Air Pollution	0.000156	9.82e-05	8.49e-05	8.28e-05	5.58e-05	-0.000240
	(0.000360)	(0.000360)	(0.000359)	(0.000358)	(0.000355)	(0.000346)
Air Pollution	3.13e-05	-3.54e-06	2.42e-05	2.81e-05	-6.20e-05	-0.000142
	(0.000376)	(0.000376)	(0.000375)	(0.000373)	(0.000368)	(0.000362)
Total New Builds	0.000133	8.29e-05	6.75e-05	-1.52e-05	-0.000101	-0.000153
	(0.000135)	(0.000129)	(0.000127)	(0.000124)	(0.000112)	(0.000109)
Total Value New Builds	0.00278	0.00237	0.00122	0.00426	0.00473	0.00549
	(0.00265)	(0.00250)	(0.00245)	(0.00234)	(0.00220)	(0.00210)
Post # Months	0.0606	0.0690	0.0679	0.0668	0.0680	0.0653
	(0.0101)	(0.00995)	(0.00986)	(0.00979)	(0.00976)	(0.00974)
Zone X Post # Months	0.0746	0.0317	0.0295	0.0267	0.0228	0.0274
	(0.0204)	(0.0152)	(0.0122)	(0.0104)	(0.00948)	(0.00880)
Constant	10.85	10.86	10.87	10.84	10.84	10.83
	(0.0440)	(0.0417)	(0.0398)	(0.0385)	(0.0365)	(0.0352)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	72,191	75,768	79,945	85,281	90,615	96,128
R-squared	0.618	0.619	0.619	0.622	0.623	0.626

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A26 – Sale Price Response to 2002 Hurricanes– Repeated Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.142	0.154	0.162	0.123	0.115	0.112
	(0.0858)	(0.0737)	(0.0704)	(0.0666)	(0.0590)	(0.0511)
CRS x Zone	-0.103	-0.145	-0.149	-0.138	-0.120	-0.116
	(0.0932)	(0.0815)	(0.0778)	(0.0717)	(0.0629)	(0.0549)
Age	-0.00278	-0.00258	-0.00236	-0.00225	-0.00240	-0.00254
	(0.00166)	(0.00149)	(0.00121)	(0.00100)	(0.000902)	(0.000731)
Living Space	8.28e-05	8.01e-05	8.11e-05	7.20e-05	6.78e-05	6.95e-05
	(3.96e-05)	(3.41e-05)	(2.89e-05)	(2.41e-05)	(2.17e-05)	(1.99e-05)
Mo Sales/Avg Mo Sales	-0.00679	-0.0107	-0.00249	-0.00807	-0.0229	-0.0238
	(0.0273)	(0.0258)	(0.0230)	(0.0195)	(0.0177)	(0.0158)
Mo Sales	-0.000239	-7.89e-05	-0.000135	-7.83e-05	5.12e-05	-2.24e-05
	(0.000425)	(0.000383)	(0.000341)	(0.000293)	(0.000273)	(0.000251)
Lag Air Pollution	0.000610	0.000438	0.000361	0.000446	0.000283	0.000202
	(0.00113)	(0.00107)	(0.000970)	(0.000872)	(0.000798)	(0.000702)
Air Pollution	-0.000846	-0.000979	-0.000965	-0.00127	-0.00130	-0.00101
	(0.00102)	(0.000949)	(0.000884)	(0.000803)	(0.000734)	(0.000668)
Total New Builds	-0.000166	-0.000263	-0.000270	-0.000374	-0.000337	-0.000326
	(0.000371)	(0.000324)	(0.000277)	(0.000260)	(0.000226)	(0.000197)
Total Value New Builds	0.000276	0.000966	0.00119	0.00550	0.00573	0.00549
	(0.00643)	(0.00589)	(0.00532)	(0.00485)	(0.00425)	(0.00389)
Post # Months	0.0582	0.0654	0.0727	0.0795	0.0850	0.0911
	(0.0277)	(0.0258)	(0.0241)	(0.0221)	(0.0211)	(0.0199)
Zone X Post # Months	0.119	0.102	0.102	0.0867	0.0916	0.0825
	(0.0553)	(0.0382)	(0.0304)	(0.0233)	(0.0188)	(0.0162)
Constant	11.65	11.66	11.64	11.60	11.61	11.62
	(0.0977)	(0.0921)	(0.0819)	(0.0739)	(0.0641)	(0.0590)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	25,651	26,204	26,925	27,854	28,782	29,767
R-squared	0.994	0.993	0.992	0.990	0.989	0.988

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A27 – Sale Price Response to 2002 Hurricanes – All Sales, Controls, Information

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.0702	0.0564	0.0403	0.0201	0.0181	0.00314
	(0.0260)	(0.0254)	(0.0248)	(0.0242)	(0.0237)	(0.0234)
Zone High Risk	0.234	0.233	0.232	0.232	0.231	0.230
	(0.00688)	(0.00684)	(0.00678)	(0.00672)	(0.00668)	(0.00664)
CRS x Zone	-0.0675	-0.0732	-0.0751	-0.0734	-0.0700	-0.0690
	(0.0193)	(0.0191)	(0.0188)	(0.0185)	(0.0184)	(0.0182)
Age	-0.00212	-0.00218	-0.00220	-0.00226	-0.00227	-0.00232
	(0.000107)	(0.000103)	(9.90e-05)	(9.39e-05)	(8.94e-05)	(8.54e-05)
Living Space	0.000422	0.000419	0.000416	0.000413	0.000409	0.000407
	(1.69e-05)	(1.59e-05)	(1.51e-05)	(1.40e-05)	(1.31e-05)	(1.23e-05)
Mo Sales/Avg Mo Sales	0.000362	-0.00392	-0.00307	-0.00473	-0.00449	-0.00448
	(0.00883)	(0.00863)	(0.00844)	(0.00810)	(0.00774)	(0.00747)
Mo Sales	-2.83e-05	-1.43e-05	7.70e-06	-2.81e-05	-5.37e-05	-0.000173
	(0.000150)	(0.000143)	(0.000141)	(0.000135)	(0.000132)	(0.000129)
Lag Air Pollution	0.000156	9.69e-05	8.20e-05	8.12e-05	5.51e-05	-0.000236
	(0.000360)	(0.000360)	(0.000359)	(0.000357)	(0.000355)	(0.000346)
Air Pollution	3.13e-05	-7.16e-06	1.88e-05	2.22e-05	-6.46e-05	-0.000147
	(0.000376)	(0.000376)	(0.000375)	(0.000373)	(0.000368)	(0.000362)
Total New Builds	0.000132	8.04e-05	6.48e-05	-2.15e-05	-0.000111	-0.000164
	(0.000135)	(0.000129)	(0.000127)	(0.000124)	(0.000112)	(0.000109)
Total Value New Builds	0.00280	0.00241	0.00120	0.00434	0.00481	0.00577
	(0.00265)	(0.00250)	(0.00245)	(0.00234)	(0.00220)	(0.00211)
Post Months	0.0581	0.0633	0.0626	0.0617	0.0641	0.0613
	(0.0103)	(0.0101)	(0.00995)	(0.00986)	(0.00982)	(0.00979)
Zone X Post Months	0.0770	0.0546	0.0564	0.0563	0.0467	0.0540
	(0.0274)	(0.0192)	(0.0154)	(0.0131)	(0.0118)	(0.0110)
CRS X Post # Mos	0.0406	0.0901	0.0899	0.0929	0.0779	0.0839
	(0.0363)	(0.0287)	(0.0250)	(0.0213)	(0.0196)	(0.0184)
CRS X Zone X Post # Mos	-0.0406	-0.127	-0.139	-0.149	-0.126	-0.139
	(0.0518)	(0.0388)	(0.0327)	(0.0278)	(0.0257)	(0.0241)
Constant	10.85	10.86	10.87	10.84	10.84	10.83
	(0.0440)	(0.0417)	(0.0398)	(0.0385)	(0.0365)	(0.0353)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	72,191	75,768	79,945	85,281	90,615	96,128
R-squared	0.618	0.619	0.619	0.622	0.623	0.626

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A28 – Sale Price Response to 2002 Hurricanes – Repeated Sales, Controls, Info

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.135	0.149	0.144	0.111	0.109	0.102
	(0.0890)	(0.0777)	(0.0727)	(0.0683)	(0.0610)	(0.0556)
CRS x Zone	-0.0981	-0.136	-0.131	-0.121	-0.109	-0.0958
	(0.0964)	(0.0854)	(0.0805)	(0.0744)	(0.0661)	(0.0605)
Age	-0.00276	-0.00260	-0.00237	-0.00226	-0.00241	-0.00256
	(0.00165)	(0.00149)	(0.00121)	(0.00100)	(0.000903)	(0.000733)
Living Space	8.22e-05	8.11e-05	8.12e-05	7.25e-05	6.83e-05	7.05e-05
	(3.92e-05)	(3.38e-05)	(2.86e-05)	(2.40e-05)	(2.17e-05)	(1.99e-05)
Mo Sales/Avg Mo Sales	-0.00581	-0.0110	-0.00162	-0.00827	-0.0234	-0.0242
	(0.0274)	(0.0258)	(0.0231)	(0.0196)	(0.0179)	(0.0159)
Mo Sales	-0.000247	-7.67e-05	-0.000146	-7.74e-05	5.35e-05	-2.49e-05
	(0.000425)	(0.000383)	(0.000342)	(0.000293)	(0.000273)	(0.000251)
Lag Air Pollution	0.000619	0.000438	0.000369	0.000451	0.000287	0.000208
	(0.00113)	(0.00107)	(0.000969)	(0.000871)	(0.000797)	(0.000701)
Air Pollution	-0.000823	-0.000980	-0.000957	-0.00127	-0.00130	-0.00101
	(0.00102)	(0.000948)	(0.000884)	(0.000803)	(0.000734)	(0.000667)
Total New Builds	-0.000164	-0.000271	-0.000273	-0.000380	-0.000340	-0.000332
	(0.000371)	(0.000324)	(0.000278)	(0.000260)	(0.000227)	(0.000197)
Total Value New Builds	0.000243	0.00111	0.00116	0.00560	0.00578	0.00564
	(0.00645)	(0.00589)	(0.00533)	(0.00486)	(0.00426)	(0.00390)
Post # Months	0.0556	0.0650	0.0707	0.0788	0.0850	0.0913
	(0.0283)	(0.0261)	(0.0243)	(0.0224)	(0.0213)	(0.0201)
Zone X Post # Months	0.107	0.115	0.106	0.0951	0.0979	0.0936
	(0.0667)	(0.0498)	(0.0364)	(0.0275)	(0.0221)	(0.0193)
CRS X Post # Mos	0.0459	0.0121	0.0415	0.0212	0.00875	0.0121
	(0.0778)	(0.0650)	(0.0586)	(0.0482)	(0.0401)	(0.0402)
CRS X Zone X Post # Mos	-0.0102	-0.0433	-0.0462	-0.0398	-0.0248	-0.0414
	(0.130)	(0.0950)	(0.0799)	(0.0628)	(0.0523)	(0.0497)
Constant	11.65	11.66	11.64	11.60	11.61	11.62
	(0.0978)	(0.0917)	(0.0819)	(0.0740)	(0.0642)	(0.0590)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	25,651	26,204	26,925	27,854	28,782	29,767
R-squared	0.994	0.993	0.992	0.990	0.989	0.988

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A29 – Sale Price Response to Hurricane Charley – All Sales, No Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
Zone High Risk	0.176	0.176	0.176	0.176	0.176	0.176
	(0.00464)	(0.00464)	(0.00464)	(0.00464)	(0.00464)	(0.00464)
Post # Months	0.355	0.372	0.378	0.395	0.433	0.453
	(0.0101)	(0.00765)	(0.00646)	(0.00560)	(0.00493)	(0.00449)
Zone X Post # Months	0.0921	0.106	0.0993	0.103	0.0735	0.0676
	(0.0240)	(0.0179)	(0.0150)	(0.0124)	(0.0111)	(0.0104)
Constant	12.11	12.11	12.11	12.11	12.11	12.11
	(0.00214)	(0.00214)	(0.00214)	(0.00214)	(0.00214)	(0.00214)
Year FE	N	N	N	N	N	N
Month FE	N	N	N	N	N	N
County-Year FE	N	N	N	N	N	N
Municipality FE	N	N	N	N	N	N
House FE	N	N	N	N	N	N
Observations	148,044	152,515	156,797	162,602	168,782	174,454
R-squared	0.021	0.030	0.037	0.049	0.062	0.073

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A30 – Sale Price Response to Hurricane Charley – All Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.0269	0.0272	0.0273	0.0503	0.0514	0.0468
	(0.0189)	(0.0186)	(0.0184)	(0.0258)	(0.0253)	(0.0248)
Zone High Risk	0.241	0.239	0.238	0.225	0.223	0.222
	(0.00535)	(0.00532)	(0.00528)	(0.00915)	(0.00865)	(0.00826)
CRS x Zone	-0.131	-0.133	-0.137	-0.135	-0.137	-0.134
	(0.0133)	(0.0130)	(0.0128)	(0.0135)	(0.0132)	(0.0129)
Age	-0.00216	-0.00214	-0.00213	-0.00202	-0.00203	-0.00199
	(6.83e-05)	(6.74e-05)	(6.59e-05)	(9.93e-05)	(9.20e-05)	(8.45e-05)
Living Space	0.000391	0.000388	0.000387	0.000314	0.000314	0.000314
	(9.11e-06)	(8.84e-06)	(8.58e-06)	(5.61e-05)	(5.39e-05)	(5.21e-05)
Mo Sales/Avg Mo Sales	0.00332	0.00472	0.00606	0.0143	0.0189	0.0189
	(0.00628)	(0.00619)	(0.00613)	(0.00621)	(0.00601)	(0.00596)
Mo Sales	-0.000331	-0.000285	-0.000238	-0.000201	-0.000277	-0.000314
	(0.000106)	(0.000104)	(0.000103)	(0.000108)	(0.000103)	(0.000102)
Lag Air Pollution	-0.000345	-0.000281	-0.000289	-0.000303	-0.000290	-0.000431
	(0.000329)	(0.000328)	(0.000328)	(0.000347)	(0.000351)	(0.000344)
Air Pollution	-7.59e-05	-0.000104	-0.000118	-7.83e-05	-0.000185	-0.000351
	(0.000344)	(0.000344)	(0.000344)	(0.000342)	(0.000338)	(0.000329)
Total New Builds	-9.91e-06	-3.86e-05	-3.98e-05	2.47e-05	-5.72e-06	-8.78e-06
	(9.25e-05)	(9.19e-05)	(8.95e-05)	(8.29e-05)	(8.04e-05)	(7.90e-05)
Total Value New Builds	0.00460	0.00534	0.00568	0.00468	0.00425	0.00444
	(0.00171)	(0.00170)	(0.00166)	(0.00159)	(0.00156)	(0.00153)
Post # Months	-0.0106	-0.0146	-0.0145	-0.0146	-0.0128	-0.0118
	(0.00793)	(0.00668)	(0.00664)	(0.00675)	(0.00674)	(0.00674)
Zone X Post # Months	0.0695	0.0764	0.0771	0.0876	0.0817	0.0776
	(0.0166)	(0.0125)	(0.0107)	(0.00918)	(0.00827)	(0.00774)
Constant	10.81	10.81	10.79	10.90	10.91	10.90
	(0.0292)	(0.0288)	(0.0282)	(0.0860)	(0.0823)	(0.0810)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	128,032	132,186	136,060	141,380	147,174	152,543
R-squared	0.643	0.645	0.646	0.619	0.624	0.628

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A31 – Sale Price Response to Hurricane Charley – Repeated Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.109	0.112	0.115	0.106	0.111	0.115
	(0.0389)	(0.0372)	(0.0351)	(0.0301)	(0.0290)	(0.0288)
CRS x Zone	-0.0785	-0.0797	-0.0831	-0.0695	-0.0736	-0.0814
	(0.0403)	(0.0388)	(0.0366)	(0.0327)	(0.0316)	(0.0314)
Age	-0.00167	-0.00185	-0.00196	-0.00155	-0.00170	-0.00178
	(0.000538)	(0.000531)	(0.000531)	(0.000411)	(0.000396)	(0.000386)
Living Space	3.97e-05	4.19e-05	4.61e-05	1.37e-05	1.46e-05	1.54e-05
	(2.15e-05)	(1.98e-05)	(2.03e-05)	(1.10e-05)	(1.13e-05)	(1.16e-05)
Mo Sales/Avg Mo Sales	-0.00383	-0.00767	-0.00841	-0.00195	-0.00159	-0.00130
	(0.0109)	(0.0104)	(0.00993)	(0.00950)	(0.00892)	(0.00849)
Mo Sales	-0.000316	-0.000223	-0.000155	-0.000166	-0.000139	-0.000187
	(0.000171)	(0.000162)	(0.000153)	(0.000147)	(0.000137)	(0.000131)
Lag Air Pollution	-0.000156	0.000103	0.000152	0.000153	0.000390	0.000243
	(0.000509)	(0.000486)	(0.000471)	(0.000452)	(0.000425)	(0.000412)
Air Pollution	-0.000740	-0.000707	-0.000774	-0.000584	-0.000214	-0.000387
	(0.000500)	(0.000477)	(0.000462)	(0.000443)	(0.000426)	(0.000406)
Total New Builds	-9.69e-05	-0.000114	-0.000155	-0.000123	-9.78e-05	-8.35e-05
	(0.000140)	(0.000132)	(0.000123)	(0.000106)	(9.99e-05)	(9.65e-05)
Total Value New Builds	0.00391	0.00374	0.00408	0.00444	0.00354	0.00302
	(0.00290)	(0.00273)	(0.00255)	(0.00230)	(0.00214)	(0.00206)
Post # Months	-0.0236	-0.0188	-0.0174	-0.0163	-0.0155	-0.0147
	(0.0120)	(0.0104)	(0.01000)	(0.00969)	(0.00936)	(0.00915)
Zone X Post # Months	0.0595	0.0609	0.0645	0.0728	0.0797	0.0861
	(0.0292)	(0.0196)	(0.0162)	(0.0131)	(0.0112)	(0.0102)
Constant	11.60	11.61	11.60	11.61	11.62	11.63
	(0.0447)	(0.0446)	(0.0419)	(0.0362)	(0.0338)	(0.0325)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	48,201	49,311	50,430	52,063	53,686	55,242
R-squared	0.984	0.983	0.982	0.981	0.980	0.979

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A32 – Sale Price Response to Hurricane Charley – All Sales, Controls, Information

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.0205	0.0153	0.0116	0.0275	0.0257	0.0224
	(0.0190)	(0.0188)	(0.0187)	(0.0256)	(0.0250)	(0.0246)
Zone High Risk	0.241	0.239	0.237	0.222	0.220	0.219
	(0.00537)	(0.00535)	(0.00533)	(0.00920)	(0.00866)	(0.00824)
CRS x Zone	-0.126	-0.124	-0.122	-0.111	-0.109	-0.106
	(0.0134)	(0.0134)	(0.0133)	(0.0145)	(0.0142)	(0.0140)
Age	-0.00216	-0.00214	-0.00213	-0.00202	-0.00202	-0.00199
	(6.83e-05)	(6.74e-05)	(6.59e-05)	(9.93e-05)	(9.20e-05)	(8.45e-05)
Living Space	0.000391	0.000388	0.000387	0.000314	0.000314	0.000314
	(9.12e-06)	(8.84e-06)	(8.58e-06)	(5.61e-05)	(5.39e-05)	(5.21e-05)
Mo Sales/Avg Mo Sales	0.00359	0.00545	0.00711	0.0153	0.0195	0.0194
	(0.00628)	(0.00620)	(0.00614)	(0.00623)	(0.00602)	(0.00597)
Mo Sales	-0.000337	-0.000300	-0.000259	-0.000228	-0.000294	-0.000325
	(0.000106)	(0.000104)	(0.000103)	(0.000108)	(0.000103)	(0.000103)
Lag Air Pollution	-0.000351	-0.000294	-0.000301	-0.000317	-0.000305	-0.000434
	(0.000328)	(0.000328)	(0.000328)	(0.000347)	(0.000351)	(0.000345)
Air Pollution	-8.22e-05	-0.000109	-0.000122	-8.27e-05	-0.000193	-0.000350
	(0.000344)	(0.000344)	(0.000344)	(0.000342)	(0.000338)	(0.000329)
Total New Builds	-1.25e-05	-4.66e-05	-3.81e-05	2.68e-05	-7.23e-06	-8.98e-06
	(9.25e-05)	(9.19e-05)	(8.95e-05)	(8.29e-05)	(8.05e-05)	(7.91e-05)
Total Value New Builds	0.00453	0.00525	0.00550	0.00444	0.00398	0.00419
	(0.00171)	(0.00170)	(0.00166)	(0.00160)	(0.00156)	(0.00153)
Post # Months	-0.0156	-0.0200	-0.0199	-0.0204	-0.0182	-0.0162
	(0.00776)	(0.00660)	(0.00657)	(0.00667)	(0.00667)	(0.00667)
Zone X Post # Months	0.0714	0.0784	0.0890	0.107	0.0988	0.0944
	(0.0212)	(0.0162)	(0.0138)	(0.0117)	(0.0104)	(0.00971)
CRS X Post # Months	0.151	0.150	0.141	0.143	0.131	0.108
	(0.0698)	(0.0401)	(0.0293)	(0.0240)	(0.0202)	(0.0187)
CRS X Zone X Post # Mos	-0.142	-0.136	-0.151	-0.169	-0.154	-0.135
	(0.0755)	(0.0453)	(0.0346)	(0.0286)	(0.0246)	(0.0228)
Constant	10.81	10.81	10.80	10.91	10.91	10.90
	(0.0292)	(0.0288)	(0.0282)	(0.0861)	(0.0824)	(0.0811)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	128,032	132,186	136,060	141,380	147,174	152,543
R-squared	0.643	0.645	0.646	0.619	0.624	0.628

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A33 – Sale Price Response to Hurricane Charley – Repeated Sales, Controls, Info

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.111	0.111	0.109	0.0956	0.0962	0.0944
	(0.0398)	(0.0385)	(0.0369)	(0.0320)	(0.0310)	(0.0308)
CRS x Zone	-0.0801	-0.0765	-0.0728	-0.0524	-0.0501	-0.0499
	(0.0412)	(0.0401)	(0.0382)	(0.0345)	(0.0334)	(0.0332)
Age	-0.00167	-0.00185	-0.00197	-0.00157	-0.00172	-0.00182
	(0.000538)	(0.000532)	(0.000532)	(0.000412)	(0.000398)	(0.000388)
Living Space	3.97e-05	4.19e-05	4.60e-05	1.37e-05	1.46e-05	1.55e-05
	(2.14e-05)	(1.98e-05)	(2.03e-05)	(1.10e-05)	(1.14e-05)	(1.16e-05)
Mo Sales/Avg Mo Sales	-0.00382	-0.00763	-0.00839	-0.00199	-0.00212	-0.00187
	(0.0109)	(0.0104)	(0.00992)	(0.00950)	(0.00891)	(0.00849)
Mo Sales	-0.000315	-0.000224	-0.000160	-0.000178	-0.000154	-0.000205
	(0.000171)	(0.000161)	(0.000152)	(0.000147)	(0.000136)	(0.000131)
Lag Air Pollution	-0.000152	0.000111	0.000172	0.000186	0.000420	0.000276
	(0.000509)	(0.000486)	(0.000471)	(0.000452)	(0.000425)	(0.000411)
Air Pollution	-0.000736	-0.000706	-0.000770	-0.000556	-0.000191	-0.000357
	(0.000501)	(0.000477)	(0.000462)	(0.000443)	(0.000426)	(0.000406)
Total New Builds	-9.56e-05	-0.000110	-0.000149	-0.000120	-8.95e-05	-7.44e-05
	(0.000140)	(0.000132)	(0.000123)	(0.000106)	(9.99e-05)	(9.64e-05)
Total Value New Builds	0.00393	0.00375	0.00414	0.00451	0.00351	0.00294
	(0.00290)	(0.00272)	(0.00255)	(0.00230)	(0.00213)	(0.00206)
Post # Months	-0.0227	-0.0191	-0.0182	-0.0176	-0.0173	-0.0168
	(0.0121)	(0.0105)	(0.0101)	(0.00975)	(0.00943)	(0.00921)
Zone X Post # Months	0.0657	0.0707	0.0854	0.0987	0.106	0.116
	(0.0413)	(0.0238)	(0.0199)	(0.0164)	(0.0140)	(0.0130)
CRS X Post # Mos	-0.0300	0.0145	0.0352	0.0427	0.0591	0.0791
	(0.0620)	(0.0602)	(0.0461)	(0.0352)	(0.0324)	(0.0321)
CRS X Zone X Post # Mos	0.0127	-0.0393	-0.0865	-0.104	-0.121	-0.148
	(0.0800)	(0.0676)	(0.0519)	(0.0400)	(0.0360)	(0.0353)
Constant	11.60	11.61	11.60	11.61	11.62	11.64
	(0.0447)	(0.0446)	(0.0419)	(0.0361)	(0.0337)	(0.0324)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	48,201	49,311	50,430	52,063	53,686	55,242
R-squared	0.984	0.984	0.982	0.981	0.980	0.979

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A34 – Sale Price Response to Hurricane Katrina – All Sales, No Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
Zone High Risk	0.185	0.185	0.185	0.185	0.185	0.185
	(0.00429)	(0.00429)	(0.00429)	(0.00429)	(0.00429)	(0.00429)
Post # Months	0.441	0.436	0.423	0.432	0.443	0.442
	(0.0106)	(0.00789)	(0.00658)	(0.00559)	(0.00505)	(0.00471)
Zone X Post # Months	0.144	0.148	0.121	0.113	0.0914	0.0963
	(0.0269)	(0.0197)	(0.0166)	(0.0141)	(0.0126)	(0.0118)
Constant	12.19	12.19	12.19	12.19	12.19	12.19
	(0.00195)	(0.00195)	(0.00195)	(0.00195)	(0.00195)	(0.00195)
Year FE	N	N	N	N	N	N
Month FE	N	N	N	N	N	N
County-Year FE	N	N	N	N	N	N
Municipality FE	N	N	N	N	N	N
House FE	N	N	N	N	N	N
Observations	178,844	182,491	186,126	190,609	194,668	198,060
R-squared	0.023	0.030	0.035	0.043	0.049	0.054

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A35 - Sale Price Response to Hurricane Katrina – All Sales, Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.0511	0.0495	0.0439	0.0368	0.0338	0.0280
	(0.0243)	(0.0241)	(0.0237)	(0.0231)	(0.0227)	(0.0224)
Zone High Risk	0.234	0.232	0.231	0.231	0.230	0.229
	(0.00804)	(0.00788)	(0.00779)	(0.00757)	(0.00740)	(0.00724)
CRS x Zone	-0.129	-0.131	-0.131	-0.130	-0.131	-0.128
	(0.0127)	(0.0126)	(0.0124)	(0.0122)	(0.0120)	(0.0118)
Age	-0.00196	-0.00196	-0.00194	-0.00193	-0.00191	-0.00191
	(8.02e-05)	(7.72e-05)	(7.37e-05)	(7.05e-05)	(6.66e-05)	(6.37e-05)
Living Space	0.000313	0.000314	0.000315	0.000315	0.000315	0.000315
	(5.06e-05)	(4.97e-05)	(4.90e-05)	(4.79e-05)	(4.68e-05)	(4.60e-05)
Mo Sales/Avg Mo Sales	0.0191	0.0170	0.0144	0.0141	0.0123	0.0109
	(0.00592)	(0.00586)	(0.00578)	(0.00571)	(0.00566)	(0.00566)
Mo Sales	-0.000264	-0.000185	-9.69e-05	-3.35e-05	8.20e-05	0.000152
	(0.000100)	(9.75e-05)	(9.57e-05)	(9.44e-05)	(9.32e-05)	(9.20e-05)
Lag Air Pollution	-0.000414	-0.000409	-0.000366	-0.000361	-0.000259	-0.000230
	(0.000341)	(0.000343)	(0.000344)	(0.000344)	(0.000341)	(0.000339)
Air Pollution	-0.000329	-0.000310	-0.000280	-0.000299	-0.000203	-0.000243
	(0.000327)	(0.000324)	(0.000324)	(0.000323)	(0.000321)	(0.000321)
Total New Builds	1.79e-05	2.22e-05	2.74e-05	8.67e-05	0.000152	0.000154
	(7.83e-05)	(7.78e-05)	(7.77e-05)	(7.75e-05)	(7.75e-05)	(7.60e-05)
Total Value New Builds	0.00468	0.00479	0.00513	0.00505	0.00448	0.00455
	(0.00150)	(0.00148)	(0.00145)	(0.00141)	(0.00134)	(0.00132)
Post Months	-0.0188	-0.0144	-0.0105	-0.0100	-0.00751	-0.00726
	(0.00864)	(0.00714)	(0.00709)	(0.00708)	(0.00711)	(0.00710)
Zone X Post # Months	0.117	0.102	0.0876	0.0869	0.0791	0.0787
	(0.0194)	(0.0144)	(0.0123)	(0.0106)	(0.00965)	(0.00901)
Constant	10.89	10.88	10.88	10.87	10.89	10.88
	(0.0783)	(0.0765)	(0.0751)	(0.0739)	(0.0715)	(0.0706)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	156,561	159,887	163,157	167,290	171,118	174,301
R-squared	0.630	0.632	0.632	0.634	0.636	0.638

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A36 – Sale Price Response to Hurricane Katrina - Repeated Sales, Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.106	0.102	0.0919	0.0880	0.0841	0.0813
	(0.0290)	(0.0286)	(0.0281)	(0.0267)	(0.0263)	(0.0259)
CRS x Zone	-0.0619	-0.0595	-0.0496	-0.0470	-0.0472	-0.0466
	(0.0315)	(0.0312)	(0.0306)	(0.0294)	(0.0290)	(0.0287)
Age	-0.00139	-0.00136	-0.00136	-0.00139	-0.00144	-0.00144
	(0.000382)	(0.000372)	(0.000366)	(0.000357)	(0.000349)	(0.000339)
Living Space	1.50e-05	1.62e-05	1.72e-05	1.79e-05	1.93e-05	2.04e-05
	(1.14e-05)	(1.21e-05)	(1.27e-05)	(1.29e-05)	(1.36e-05)	(1.42e-05)
Mo Sales/Avg Mo Sales	-0.00110	-0.00377	-0.00500	-0.00381	-0.00262	-0.00197
	(0.00826)	(0.00814)	(0.00786)	(0.00761)	(0.00732)	(0.00712)
Mo Sales	-0.000151	-6.86e-05	-1.33e-05	1.48e-05	8.90e-05	0.000160
	(0.000128)	(0.000125)	(0.000120)	(0.000116)	(0.000112)	(0.000109)
Lag Air Pollution	0.000278	0.000333	0.000424	0.000405	0.000475	0.000520
	(0.000404)	(0.000395)	(0.000383)	(0.000377)	(0.000365)	(0.000361)
Air Pollution	-0.000473	-0.000500	-0.000504	-0.000536	-0.000406	-0.000492
	(0.000400)	(0.000389)	(0.000383)	(0.000377)	(0.000371)	(0.000365)
Total New Builds	-8.17e-05	-8.92e-05	-0.000115	-0.000121	-0.000100	-0.000114
	(9.39e-05)	(9.23e-05)	(9.04e-05)	(8.85e-05)	(8.44e-05)	(8.33e-05)
Total Value New Builds	0.00409	0.00445	0.00552	0.00594	0.00590	0.00611
	(0.00200)	(0.00194)	(0.00190)	(0.00182)	(0.00169)	(0.00165)
Post Months	-0.0305	-0.0289	-0.0280	-0.0249	-0.0232	-0.0208
	(0.0105)	(0.00899)	(0.00874)	(0.00859)	(0.00840)	(0.00828)
Zone X Post # Months	0.0909	0.0906	0.0967	0.0945	0.0994	0.0978
	(0.0222)	(0.0184)	(0.0150)	(0.0133)	(0.0118)	(0.0110)
Constant	11.61	11.57	11.56	11.57	11.56	11.56
	(0.0319)	(0.0349)	(0.0319)	(0.0305)	(0.0292)	(0.0289)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A37 - Sale Price Response to Hurricane Katrina – Information, All Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.0508	0.0472	0.0399	0.0316	0.0278	0.0219
	(0.0243)	(0.0240)	(0.0236)	(0.0231)	(0.0226)	(0.0223)
Zone High Risk	0.234	0.232	0.230	0.229	0.228	0.226
	(0.00798)	(0.00782)	(0.00771)	(0.00747)	(0.00731)	(0.00716)
CRS x Zone	-0.129	-0.128	-0.124	-0.120	-0.119	-0.116
	(0.0128)	(0.0127)	(0.0126)	(0.0125)	(0.0124)	(0.0123)
Age	-0.00196	-0.00196	-0.00194	-0.00193	-0.00191	-0.00191
	(8.01e-05)	(7.71e-05)	(7.36e-05)	(7.04e-05)	(6.66e-05)	(6.36e-05)
Living Space	0.000313	0.000314	0.000315	0.000315	0.000315	0.000315
	(5.06e-05)	(4.97e-05)	(4.90e-05)	(4.80e-05)	(4.68e-05)	(4.60e-05)
Mo Sales/Avg Mo Sales	0.0191	0.0168	0.0141	0.0136	0.0117	0.0103
	(0.00593)	(0.00588)	(0.00582)	(0.00575)	(0.00571)	(0.00571)
Mo Sales	-0.000264	-0.000189	-0.000104	-4.23e-05	7.08e-05	0.000141
	(0.000100)	(9.75e-05)	(9.57e-05)	(9.44e-05)	(9.31e-05)	(9.19e-05)
Lag Air Pollution	-0.000414	-0.000411	-0.000369	-0.000362	-0.000262	-0.000233
	(0.000341)	(0.000343)	(0.000344)	(0.000344)	(0.000341)	(0.000339)
Air Pollution	-0.000330	-0.000313	-0.000284	-0.000304	-0.000206	-0.000245
	(0.000327)	(0.000324)	(0.000324)	(0.000323)	(0.000321)	(0.000321)
Total New Builds	1.95e-05	2.54e-05	3.09e-05	9.17e-05	0.000157	0.000159
	(7.86e-05)	(7.80e-05)	(7.79e-05)	(7.77e-05)	(7.78e-05)	(7.63e-05)
Total Value New Builds	0.00467	0.00476	0.00511	0.00506	0.00446	0.00453
	(0.00150)	(0.00148)	(0.00145)	(0.00141)	(0.00134)	(0.00132)
Post Months	-0.0190	-0.0165	-0.0132	-0.0123	-0.00969	-0.00904
	(0.00862)	(0.00709)	(0.00704)	(0.00703)	(0.00705)	(0.00703)
Zone X Post Months	0.123	0.117	0.108	0.113	0.105	0.103
	(0.0245)	(0.0177)	(0.0151)	(0.0132)	(0.0122)	(0.0113)
CRS X Post # Months	0.00514	0.0396	0.0464	0.0382	0.0382	0.0329
	(0.0458)	(0.0337)	(0.0273)	(0.0226)	(0.0204)	(0.0192)
CRS X Zone X Post Mos	-0.0221	-0.0776	-0.0970	-0.105	-0.106	-0.0986
	(0.0582)	(0.0425)	(0.0355)	(0.0299)	(0.0266)	(0.0248)
Constant	10.89	10.88	10.88	10.88	10.89	10.89
	(0.0782)	(0.0765)	(0.0751)	(0.0739)	(0.0716)	(0.0706)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	156,561	159,887	163,157	167,290	171,118	174,301
R-squared	0.630	0.632	0.632	0.634	0.636	0.638

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A38 - Sale Price Response to Hurricane Katrina – Repeated Sales, Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.106	0.101	0.0894	0.0826	0.0779	0.0734
	(0.0290)	(0.0288)	(0.0283)	(0.0271)	(0.0267)	(0.0264)
CRS x Zone	-0.0609	-0.0570	-0.0442	-0.0373	-0.0354	-0.0324
	(0.0315)	(0.0313)	(0.0307)	(0.0297)	(0.0293)	(0.0291)
Age	-0.00140	-0.00136	-0.00137	-0.00141	-0.00146	-0.00147
	(0.000383)	(0.000372)	(0.000366)	(0.000358)	(0.000350)	(0.000341)
Living Space	1.50e-05	1.62e-05	1.73e-05	1.80e-05	1.94e-05	2.05e-05
	(1.14e-05)	(1.22e-05)	(1.27e-05)	(1.29e-05)	(1.37e-05)	(1.43e-05)
Mo Sales/Avg Mo Sales	-0.00147	-0.00431	-0.00549	-0.00441	-0.00301	-0.00209
	(0.00827)	(0.00813)	(0.00782)	(0.00758)	(0.00730)	(0.00709)
Mo Sales	-0.000150	-6.82e-05	-1.79e-05	5.95e-06	7.43e-05	0.000138
	(0.000128)	(0.000125)	(0.000120)	(0.000116)	(0.000112)	(0.000108)
Lag Air Pollution	0.000287	0.000336	0.000427	0.000410	0.000474	0.000524
	(0.000404)	(0.000395)	(0.000384)	(0.000377)	(0.000365)	(0.000361)
Air Pollution	-0.000477	-0.000497	-0.000498	-0.000531	-0.000394	-0.000473
	(0.000401)	(0.000389)	(0.000383)	(0.000378)	(0.000371)	(0.000364)
Total New Builds	-7.52e-05	-8.38e-05	-0.000111	-0.000117	-9.65e-05	-0.000111
	(9.39e-05)	(9.22e-05)	(9.03e-05)	(8.84e-05)	(8.43e-05)	(8.32e-05)
Total Value New Builds	0.00413	0.00443	0.00545	0.00590	0.00578	0.00595
	(0.00201)	(0.00194)	(0.00190)	(0.00182)	(0.00169)	(0.00165)
Post # Months	-0.0288	-0.0310	-0.0306	-0.0280	-0.0263	-0.0243
	(0.0106)	(0.00914)	(0.00889)	(0.00873)	(0.00853)	(0.00840)
Zone X Post # Months	0.124	0.114	0.122	0.123	0.127	0.126
	(0.0299)	(0.0232)	(0.0184)	(0.0159)	(0.0139)	(0.0128)
CRS X Post # Mos	-0.0376	0.0424	0.0517	0.0648	0.0697	0.0807
	(0.0416)	(0.0610)	(0.0472)	(0.0396)	(0.0347)	(0.0322)
CRS X Zone X Post # Mos	-0.0575	-0.105	-0.116	-0.140	-0.146	-0.157
	(0.0560)	(0.0679)	(0.0533)	(0.0452)	(0.0397)	(0.0370)
Constant	11.61	11.57	11.56	11.57	11.57	11.56
	(0.0319)	(0.0351)	(0.0320)	(0.0305)	(0.0293)	(0.0289)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	60,138	61,111	62,137	63,449	64,650	65,626
R-squared	0.980	0.979	0.978	0.977	0.977	0.976

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A39 – Sale Price Response to 2007 Hurricanes – All Sales, No Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
Zone High Risk	0.190	0.190	0.190	0.190	0.190	0.190
	(0.00392)	(0.00392)	(0.00392)	(0.00392)	(0.00392)	(0.00392)
Post # Months	0.338	0.337	0.337	0.344	0.363	0.365
	(0.0127)	(0.00956)	(0.00810)	(0.00713)	(0.00653)	(0.00619)
Zone X Post # Months	0.161	0.156	0.132	0.168	0.144	0.133
	(0.0318)	(0.0243)	(0.0192)	(0.0162)	(0.0148)	(0.0139)
Constant	12.29	12.29	12.29	12.29	12.29	12.29
	(0.00174)	(0.00174)	(0.00174)	(0.00174)	(0.00174)	(0.00174)
Year FE	N	N	N	N	N	N
Month FE	N	N	N	N	N	N
County-Year FE	N	N	N	N	N	N
Municipality FE	N	N	N	N	N	N
House FE	N	N	N	N	N	N
Observations	219,792	221,772	223,921	226,601	228,800	230,592
R-squared	0.016	0.018	0.020	0.025	0.028	0.030

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A40 – Sale Price Response to 2007 Hurricanes– All Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.0162	0.0171	0.0176	0.0179	0.0159	0.0148
	(0.0201)	(0.0199)	(0.0198)	(0.0196)	(0.0194)	(0.0194)
Zone High Risk	0.236	0.236	0.236	0.237	0.237	0.237
	(0.00648)	(0.00641)	(0.00635)	(0.00626)	(0.00615)	(0.00607)
CRS x Zone	-0.124	-0.125	-0.127	-0.129	-0.130	-0.130
	(0.0109)	(0.0109)	(0.0108)	(0.0106)	(0.0106)	(0.0105)
Age	-0.00184	-0.00185	-0.00185	-0.00187	-0.00187	-0.00187
	(5.19e-05)	(5.15e-05)	(5.12e-05)	(5.09e-05)	(5.07e-05)	(5.06e-05)
Living Space	0.000310	0.000309	0.000310	0.000310	0.000310	0.000310
	(4.02e-05)	(3.96e-05)	(3.94e-05)	(3.90e-05)	(3.84e-05)	(3.81e-05)
Mo Sales/Avg Mo Sales	0.00291	0.00277	0.00249	0.00174	0.00156	0.000685
	(0.00518)	(0.00511)	(0.00508)	(0.00505)	(0.00501)	(0.00503)
Mo Sales	0.000396	0.000392	0.000387	0.000398	0.000410	0.000427
	(8.28e-05)	(8.18e-05)	(8.02e-05)	(7.93e-05)	(7.83e-05)	(7.76e-05)
Lag Air Pollution	-0.000251	-0.000241	-0.000219	-0.000223	-0.000285	-0.000185
	(0.000339)	(0.000339)	(0.000340)	(0.000340)	(0.000338)	(0.000335)
Air Pollution	-0.000428	-0.000430	-0.000441	-0.000446	-0.000502	-0.000371
	(0.000316)	(0.000316)	(0.000316)	(0.000316)	(0.000315)	(0.000314)
Total New Builds	0.000219	0.000240	0.000248	0.000266	0.000296	0.000312
	(6.90e-05)	(6.84e-05)	(6.77e-05)	(6.78e-05)	(6.86e-05)	(6.85e-05)
Total Value New Builds	0.00584	0.00538	0.00518	0.00525	0.00535	0.00502
	(0.00120)	(0.00117)	(0.00116)	(0.00115)	(0.00113)	(0.00113)
Post # Months	-0.0772	-0.0843	-0.0821	-0.0826	-0.0817	-0.0815
	(0.00992)	(0.00888)	(0.00868)	(0.00872)	(0.00869)	(0.00866)
Zone X Post # Months	0.0537	0.0634	0.0517	0.0539	0.0504	0.0482
	(0.0226)	(0.0187)	(0.0157)	(0.0132)	(0.0125)	(0.0116)
Constant	10.88	10.88	10.89	10.89	10.89	10.89
	(0.0642)	(0.0640)	(0.0635)	(0.0627)	(0.0615)	(0.0612)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	193,598	195,244	197,004	199,238	201,038	202,516
R-squared	0.643	0.643	0.643	0.645	0.645	0.646

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A41 – Sale Price Response to 2007 Hurricanes– Repeated Sales, Controls

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.0659	0.0657	0.0610	0.0614	0.0588	0.0602
	(0.0232)	(0.0230)	(0.0231)	(0.0235)	(0.0233)	(0.0232)
CRS x Zone	-0.0227	-0.0214	-0.0148	-0.0159	-0.0131	-0.0147
	(0.0263)	(0.0261)	(0.0262)	(0.0266)	(0.0264)	(0.0262)
Age	-0.00201	-0.00208	-0.00210	-0.00222	-0.00227	-0.00231
	(0.000333)	(0.000333)	(0.000329)	(0.000323)	(0.000321)	(0.000317)
Living Space	2.72e-05	2.78e-05	2.83e-05	2.88e-05	2.93e-05	2.93e-05
	(1.68e-05)	(1.71e-05)	(1.70e-05)	(1.69e-05)	(1.69e-05)	(1.67e-05)
Mo Sales/Avg Mo Sales	-0.00515	-0.00592	-0.00750	-0.00649	-0.00723	-0.00746
	(0.00610)	(0.00600)	(0.00589)	(0.00580)	(0.00570)	(0.00564)
Mo Sales	0.000376	0.000413	0.000442	0.000438	0.000474	0.000494
	(9.22e-05)	(9.02e-05)	(8.78e-05)	(8.57e-05)	(8.40e-05)	(8.29e-05)
Lag Air Pollution	0.000609	0.000631	0.000595	0.000621	0.000589	0.000644
	(0.000341)	(0.000338)	(0.000336)	(0.000332)	(0.000330)	(0.000328)
Air Pollution	-0.000674	-0.000677	-0.000694	-0.000649	-0.000700	-0.000519
	(0.000342)	(0.000340)	(0.000338)	(0.000335)	(0.000332)	(0.000330)
Total New Builds	-7.11e-05	-5.44e-05	-4.82e-05	-2.48e-05	-1.05e-05	9.96e-06
	(6.94e-05)	(6.91e-05)	(6.79e-05)	(6.68e-05)	(6.61e-05)	(6.58e-05)
Total Value New Builds	0.00559	0.00498	0.00499	0.00496	0.00467	0.00420
	(0.00138)	(0.00137)	(0.00135)	(0.00133)	(0.00131)	(0.00129)
Post # Months	-0.0885	-0.0929	-0.0910	-0.0892	-0.0885	-0.0877
	(0.0130)	(0.0114)	(0.0112)	(0.0111)	(0.0110)	(0.0109)
Zone X Post # Months	0.0663	0.0410	0.0371	0.0360	0.0381	0.0340
	(0.0385)	(0.0260)	(0.0199)	(0.0166)	(0.0149)	(0.0137)
Constant	11.57	11.55	11.56	11.58	11.59	11.60
	(0.0283)	(0.0319)	(0.0287)	(0.0280)	(0.0277)	(0.0275)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	74,550	75,061	75,663	76,388	76,975	77,488
R-squared	0.973	0.973	0.973	0.973	0.972	0.972

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A42 – Sale Price Response to 2007 Hurricanes – All Sales, Controls, Information

	(1)	(2)	(3)	(4)	(5)	(6)
Variables:	Log Price	Log Price	Log Price	Log Price	Log Price	Log Price
CRS Public Info and Map Par.	0.0164	0.0171	0.0161	0.0144	0.0127	0.0117
	(0.0201)	(0.0199)	(0.0198)	(0.0196)	(0.0195)	(0.0194)
Zone High Risk	0.236	0.236	0.235	0.235	0.235	0.235
	(0.00650)	(0.00641)	(0.00633)	(0.00624)	(0.00614)	(0.00607)
CRS x Zone	-0.124	-0.124	-0.124	-0.123	-0.123	-0.122
	(0.0110)	(0.0110)	(0.0109)	(0.0108)	(0.0108)	(0.0108)
Age	-0.00184	-0.00185	-0.00186	-0.00187	-0.00187	-0.00187
	(5.19e-05)	(5.15e-05)	(5.12e-05)	(5.09e-05)	(5.07e-05)	(5.06e-05)
Living Space	0.000310	0.000309	0.000310	0.000310	0.000310	0.000310
	(4.02e-05)	(3.96e-05)	(3.94e-05)	(3.90e-05)	(3.84e-05)	(3.81e-05)
Mo Sales/Avg Mo Sales	0.00246	0.00236	0.00206	0.00158	0.00112	0.000141
	(0.00518)	(0.00512)	(0.00509)	(0.00506)	(0.00502)	(0.00504)
Mo Sales	0.000409	0.000404	0.000399	0.000404	0.000425	0.000447
	(8.28e-05)	(8.16e-05)	(8.01e-05)	(7.91e-05)	(7.82e-05)	(7.75e-05)
Lag Air Pollution	-0.000257	-0.000248	-0.000230	-0.000232	-0.000291	-0.000193
	(0.000339)	(0.000339)	(0.000340)	(0.000339)	(0.000338)	(0.000335)
Air Pollution	-0.000433	-0.000436	-0.000448	-0.000450	-0.000504	-0.000371
	(0.000316)	(0.000316)	(0.000316)	(0.000315)	(0.000315)	(0.000314)
Total New Builds	0.000220	0.000241	0.000244	0.000260	0.000288	0.000301
	(6.90e-05)	(6.84e-05)	(6.76e-05)	(6.77e-05)	(6.85e-05)	(6.85e-05)
Total Value New Builds	0.00583	0.00539	0.00525	0.00533	0.00546	0.00519
	(0.00120)	(0.00118)	(0.00116)	(0.00115)	(0.00113)	(0.00113)
Post # Months	-0.0735	-0.0827	-0.0821	-0.0847	-0.0828	-0.0821
	(0.0101)	(0.00901)	(0.00876)	(0.00881)	(0.00876)	(0.00872)
Zone X Post # Months	0.0976	0.0917	0.0937	0.0969	0.101	0.100
	(0.0302)	(0.0261)	(0.0209)	(0.0174)	(0.0161)	(0.0151)
CRS X Post # Months	-0.0704	-0.0237	0.0182	0.0469	0.0261	0.0180
	(0.0460)	(0.0331)	(0.0272)	(0.0233)	(0.0208)	(0.0196)
CRS X Zone X Post # Mos	-0.0288	-0.0418	-0.113	-0.134	-0.131	-0.129
	(0.0621)	(0.0466)	(0.0372)	(0.0319)	(0.0292)	(0.0273)
Constant	10.88	10.88	10.88	10.89	10.89	10.89
	(0.0642)	(0.0640)	(0.0635)	(0.0627)	(0.0615)	(0.0613)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y
House FE	N	N	N	N	N	N
Observations	193,598	195,244	197,004	199,238	201,038	202,516
R-squared	0.643	0.643	0.643	0.645	0.645	0.646

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

Table A43 – Sale Price Response to 2007 Hurricanes – Repeated Sales, Controls, Info

Variables:	(1) Log Price	(2) Log Price	(3) Log Price	(4) Log Price	(5) Log Price	(6) Log Price
CRS Public Info and Map Par.	0.0660	0.0657	0.0608	0.0604	0.0575	0.0579
	(0.0232)	(0.0230)	(0.0232)	(0.0234)	(0.0232)	(0.0231)
CRS x Zone	-0.0225	-0.0207	-0.0134	-0.0133	-0.00993	-0.0101
	(0.0263)	(0.0261)	(0.0262)	(0.0265)	(0.0263)	(0.0262)
Age	-0.00201	-0.00209	-0.00211	-0.00223	-0.00228	-0.00232
	(0.000333)	(0.000334)	(0.000329)	(0.000324)	(0.000321)	(0.000318)
Living Space	2.72e-05	2.78e-05	2.83e-05	2.89e-05	2.94e-05	2.94e-05
	(1.68e-05)	(1.71e-05)	(1.70e-05)	(1.69e-05)	(1.70e-05)	(1.68e-05)
Mo Sales/Avg Mo Sales	-0.00545	-0.00622	-0.00770	-0.00666	-0.00744	-0.00754
	(0.00611)	(0.00602)	(0.00591)	(0.00581)	(0.00571)	(0.00565)
Mo Sales	0.000384	0.000421	0.000446	0.000444	0.000481	0.000497
	(9.24e-05)	(9.03e-05)	(8.79e-05)	(8.61e-05)	(8.43e-05)	(8.31e-05)
Lag Air Pollution	0.000606	0.000628	0.000591	0.000616	0.000586	0.000642
	(0.000341)	(0.000338)	(0.000336)	(0.000332)	(0.000330)	(0.000328)
Air Pollution	-0.000679	-0.000684	-0.000701	-0.000658	-0.000708	-0.000523
	(0.000342)	(0.000340)	(0.000338)	(0.000335)	(0.000332)	(0.000329)
Total New Builds	-6.97e-05	-5.28e-05	-4.91e-05	-2.79e-05	-1.40e-05	3.92e-06
	(6.95e-05)	(6.91e-05)	(6.79e-05)	(6.68e-05)	(6.61e-05)	(6.57e-05)
Total Value New Builds	0.00557	0.00497	0.00502	0.00503	0.00475	0.00435
	(0.00138)	(0.00137)	(0.00135)	(0.00133)	(0.00131)	(0.00129)
Post # Months	-0.0866	-0.0924	-0.0911	-0.0899	-0.0893	-0.0892
	(0.0133)	(0.0112)	(0.0111)	(0.0109)	(0.0109)	(0.0108)
Zone X Post # Months	0.0887	0.0705	0.0617	0.0675	0.0694	0.0690
	(0.0434)	(0.0308)	(0.0223)	(0.0194)	(0.0175)	(0.0162)
CRS X Post # Months	-0.0400	-0.00960	0.0130	0.0254	0.0242	0.0396
	(0.0525)	(0.0600)	(0.0460)	(0.0379)	(0.0344)	(0.0323)
CRS X Zone X Post # Mos	-0.0180	-0.0599	-0.0745	-0.0985	-0.0959	-0.117
	(0.0935)	(0.0751)	(0.0564)	(0.0459)	(0.0410)	(0.0379)
Constant	11.57	11.56	11.57	11.59	11.59	11.60
	(0.0283)	(0.0320)	(0.0287)	(0.0280)	(0.0277)	(0.0275)
Year FE	Y	Y	Y	Y	Y	Y
Month FE	Y	Y	Y	Y	Y	Y
County-Year FE	Y	Y	Y	Y	Y	Y
Municipality FE	N	N	N	N	N	N
House FE	Y	Y	Y	Y	Y	Y
Observations	74,550	75,061	75,663	76,388	76,975	77,488
R-squared	0.974	0.973	0.973	0.973	0.972	0.972

Robust standard errors in parentheses. Dependent variable is listed in the column header. Column 1 defines the post period as up to 2 months after the storm. Column 2 defines the post period as up to 4 months after the storm. Column 3 defines the post period as up to 6 months after the storm. Column 4 defines the post period as up to 8 months after the storm. Column 5 defines the post period as up to 10 months after the storm. Column 6 defines the post period as up to 12 months after the storm. Post # Months and variables interacted with Post # Months are consistent with these definitions of the post period. See Table A2 for more information.

II. Appendix Figures

Figure A1 - Trends for High Risk and Low Risk Zones

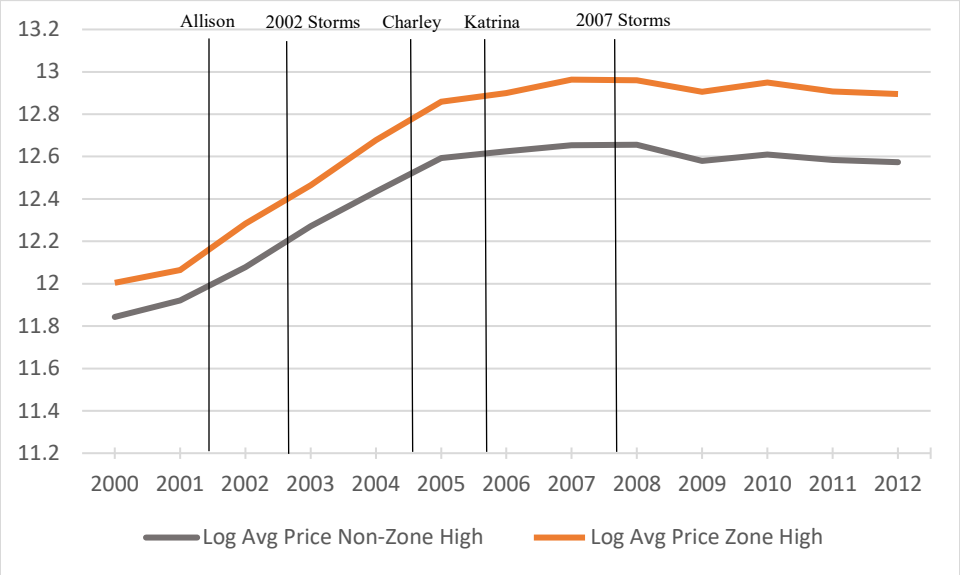


Figure A2 - Trends for CRS x Zone and Control

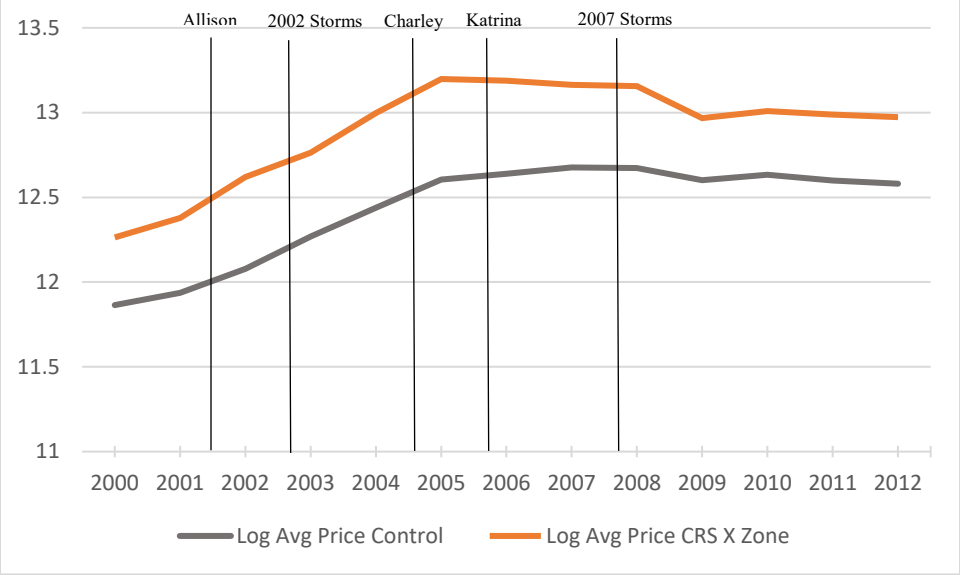


Figure A3 - Trends Across All Storms