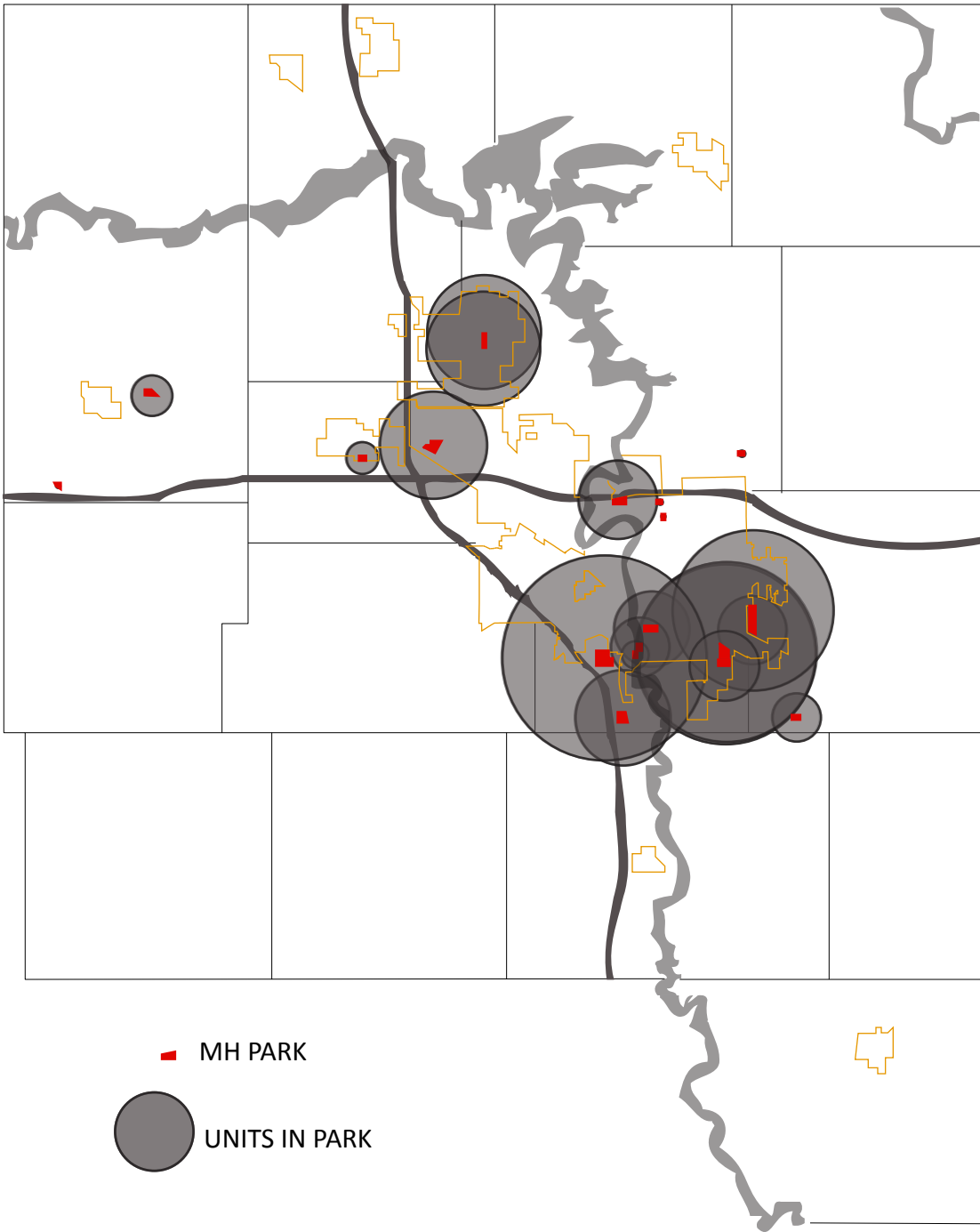


A Study of Older Manufactured Homes in Johnson County: Too Dangerous to Ignore

March 17, 2010



James Bayless, Jordan Jones, Joshua Moe,
Mark Patton and Tia Tyler

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ADMINISTRATIVE CONSENT ORDER

IN THE MATTER OF: Regency of Iowa, Inc. Johnson County, Iowa	ADMINISTRATIVE CONSENT ORDER NO. 2009-WW-69
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TO: Regency of Iowa, Inc
c/o George Cradow President
40 N 4th St
Carbondale, CO 81623

I. SUMMARY

This administrative consent order (order) is entered into between Regency of Iowa, Inc. (Regency) and the Iowa Department of Natural Resources (Department). The parties hereby agree to the issuance of this order. Regency agrees to comply with its National Pollution Discharge Elimination System (NPDES) permit, to perform and report the monitoring required in its permit, to comply with effluent limits, timely submit its Monthly Operation Reports (MORs) and pay a penalty of \$4,000.00. In the interest of avoiding litigation, the parties have agreed to the following provisions.

DNR reports show that Regency of Iowa, a Johnson County MH park, frequently violated the law

Abstract

Johnson County has a statistically significant number of manufactured homes (MH). As of 2010, Johnson County had 2952 MH in twenty different MH communities. 17% of these MH were made before the year 1976. These older “pre-1976 standard” MH pose many serious health concerns and safety hazards, including wind damage, fire damage, faulty electrical wiring, water damage and mold. Additionally, some MH communities, like Regency, have threatened their residents’ health with contaminated water supplies.

In the long term, MH can cost more than conventional homes. This fact is frequently unknown or not fully realized by MH owners. Furthermore, MH do not appreciate at the same rate as traditional homes. It is difficult to truly invest in a MH, as it often depreciates over time.

Average tenants own their own MH and rent the land from one of these communities. In 1978, the Iowa Legislature put forth the Mobile Home Parks Residential Landlord and Tenant Act. Low-income tenants are at a disadvantage in the landlord-tenant relationship, despite a 2003 amendment to the Act designed to mitigate this. If a tenant misses one payment on their lot rent, she or he could have a matter of days to act before eviction and potential loss of their MH.

Iowa Valley Habitat for Humanity is familiar with the issues surrounding low-income housing and the benefits of homeownership. We would urge all citizens of Johnson County to examine the issues facing older mobile homes. A strategy to purchase and remove older mobile homes will break the cycle of lower income families continuously owning dangerous MH that are expensive to heat, cool and maintain. Special attention should be paid to children and elderly MH residents because they suffer most from mold and unsafe conditions.



Unit number 42 in Forestview burned on January 28, 2010

History Of Manufactured Homes

The genesis, growth and implosion of the Manufactured Home (MH) industry has received significant attention over the past few years. The \$5.6 billion industry¹ is a major US employer and the source of 20% of all new single family housing starts.² A college degree in Mobile Homes Industry Education—from bachelors degree through masters—was once offered at Michigan State University.³ Multiple books have been published on the industry and a Recreational Vehicle/Manufactured Home Hall of Fame and Library was established in Elkhart, Indiana as an archive for the industry. In an interview, the museum's Historian, Archivist and Librarian, Allen 'Al' Hesselbart, described the rise, adaptation and decline of the industry.

According to Hesselbart, most major MH manufacturers began by manufacturing RVs. During the housing shortage following World War II, RVs were used as permanent housing. Designed as fair-weather campers, RVs were inadequate and unsuited to needs of year-round living. Through a combination of market innovation and regulation, MH developed into year-round residences and emerged as a discrete industry.

Throughout the 50's and 60's MH were regulated in an ad hoc manner. States, counties and cities all had different rules and regulations regarding the acceptable design, construction and placement of MH units. In addition, the quality of these homes varied greatly between regions and manufacturers. Aware of these problems, the industry organized into various regional trade organizations. These groups eventually coalesced into the Manufactured Housing Institute (MHI). In response to the differing code restrictions that excluded MH from many cities, these trade organizations worked to create a special status for MH, unique from conventional homes. This was achieved with the Housing and Urban Development (HUD) Code in the National Manufactured Home Construction and Safety Standards Act of 1974.⁴ This code has been in effect from 1976 until today.

The HUD Code regulates the home's design and construction, strength and durability, transportability, fire resistance, energy efficiency and quality. It also established standards for the heating, plumbing, air-conditioning, thermal, and electrical systems. The code has been updated numerous times since inception. Because it is a national policy, it also allows manufacturers to more efficiently mass-produce units rather than build to differing code requirements.⁵



1945 Schult



1954 Whitley



1958 Detroit; First meeting of MH industry leaders and SAE

1 Manufactured Home (Mobile Home) Manufacturing Industry in the U.S. and its International Trade. Rep. Research and Markets, Dec. 2009. Web. 19 Feb. 2010. <http://www.researchandmarkets.com/reportinfo.asp?report_id=445540&t=e&cat_id=>

2 Fraser, John H., Michelle J. Rhodes, and John T. Morgan. *The Unknown World of Mobile Homes*. Baltimore: Johns Hopkins UP, 2002. Print.

3 Edwards, Carlton M. "Manufactured Homes Now and Then." 1993. MS. Michigan State.

4 Wallis, Allan. *Wheel Estate*. Baltimore: Johns Hopkins UP, 1997. Print. 207-215

5 "History of Manufactured Homes." Personal interview. 18 Jan. 2010.



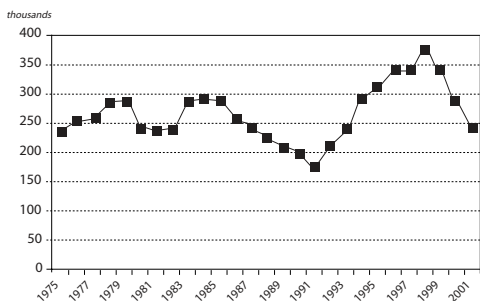
1958 Platt "10' Wide"



1960 Little Champ



1965 Marshfield "Mannor House"



Annual Placement of MH
Source, Apgar, HUD 2002

Elkhart, IN became the epicenter of large-scale, manufactured home factories. The homes produced there were shipped across the country. As the manufacturers grew their operations, suppliers established themselves there as well. The industry experienced recession in the 1980s but recovered and grew in the 1990s.

Elkhart, once home to 40 RV/MH companies, including Skyline, Coachman, and Holiday Rambler, is now being ravaged by bankruptcy, plant closures and the anxieties of a troubled industry. This collapse is simultaneously the result of both of the recent recession and the industry's uncontrolled growth in the 1990's. The rapid expansion of the industry began when MH manufacturers expanded their businesses into the realm of finance.

Historically, interest rates are higher for MH than for conventional homes and MH required a substantial down payment. In an effort to open the MH market for more consumers, MH manufacturers established their own finance divisions and were less conservative than traditional banks when approving loan applicants. In addition, they allowed lower down payments and offered lower interest rates to people with lower credit scores and higher debt ratios. In effect, the MH industry was at the forefront of the sub-prime mortgage crisis that was to happen a decade later within the larger housing market.

Some MH manufacturers, like Clayton/Vanderbilt, dealt with financing well, but the majority have been devastated. Fleetwood's financial arm was not able to weather the recession and the company filed bankruptcy in 2009(1). According to MH historian Al Hesselbart, in the 1990's thousands of loans were made to people who had no intention or ability to pay their loans. As a result, in 1998-1999 thousands of homes were repossessed. Despite this, MH manufacturers continued to build new homes until all the sales lots were full; however, savvy consumers in the market for a MH purchased the repossessed homes at 25% of the new home cost, ignoring the stock of new MH. Today, most plants are operating at 50% capacity, while others no longer exist. (2)

Statistics support Hesselbart's analysis: in 1998 the MH industry reached maximum production. That year 372,000 MH were sold. In 2008 only 115,000 were produced. The numbers for 2009 were even lower,⁶⁷ further underscoring the industry's precipitous decline.

6 "Manufactured Housing." Census Bureau Home Page. Web. 19 Feb. 2010. <<http://www.census.gov/const/www/MHindex.html>>. 7 Manufactured Home (Mobile Home) Manufacturing Industry in the U.S. and its International Trade. Rep. Research and Markets, Dec. 2009. Web. 19 Feb. 2010. <http://www.researchandmarkets.com/reportinfo.asp?report_id=445540&t=e&cat_id=>

Statistical Summary

Johnson County contains a statistically significant number of MH. As current US decennial census data is not yet available, Iowa Valley Habitat for Humanity (IVHFH) examined data from the Johnson County Treasurer's Office to estimate the number of MH in Johnson County for 2010. Specifically, IVHFH read MH tax listings for taxes payable in 2010. We hand-counted the number of units in each MH community and sorted them into two categories: before 1976 (the year the HUD code came into effect) and after 1976. The data that IVHFH collected is displayed in the chart below, ordered by the year in which the communities were built.

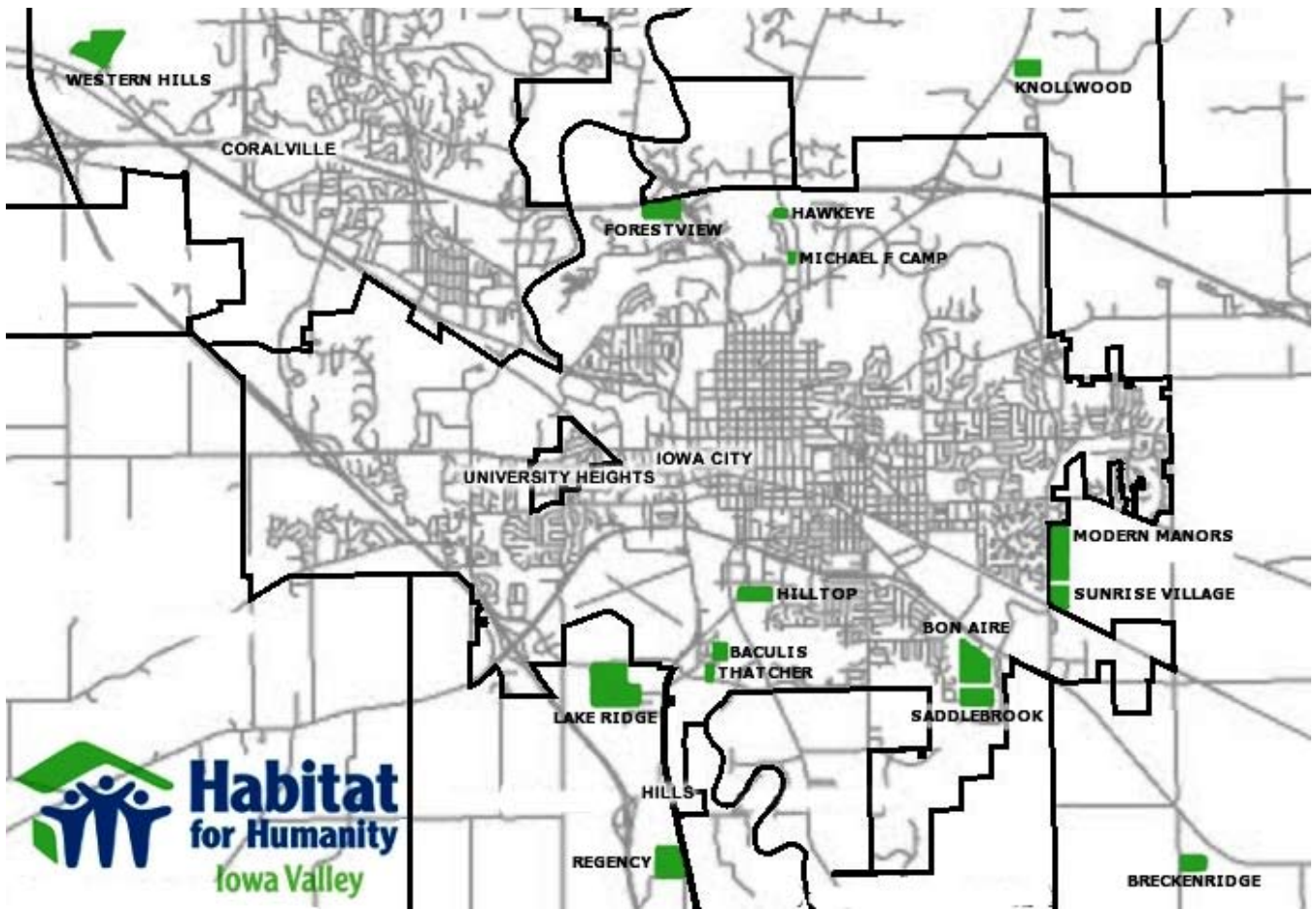
MOBILE HOME COMMUNITIES IN JOHNSON COUNTY (2010)

NAME	YR. BUILT	LOCATION	PRE-1976		POST-1976		TOTAL NO.
Forestview Trailer Ct	1950	Iowa City	134	88%	19	12%	153
Hilltop MH Park	1957	Iowa City	43	29%	104	71%	147
Breckenridge Estates*	1959	Johnson County	32	34%	62	66%	94
Knollwood MH Park*	1960	Johnson County	1	8%	11	92%	12
Michael F Camp Prop.	1960	Iowa City	4	57%	3	43%	7
Hawkeye Trailer Ct	1966	Iowa City	10	100%	0	0%	10
Holiday MH Court	1966	N. Liberty	45	18%	203	82%	248
Bon Aire MH Lodge	1967	Iowa City	10	3%	341	97%	351
Baculis MH Park	1970	Iowa City	49	43%	66	57%	115
Parkview MH	1970	Oxford	11	14%	68	86%	79
Regency MH Comm.*	1971	Johnson County	101	54%	85	46%	186
Sunrise MH Village*	1971	Johnson County	8	6%	125	94%	133
Western Hills M Estates	1972	Coralville	29	14%	180	86%	209
Thatcher MH Park	1974	Iowa City	21	40%	32	60%	53
Modern Manor*	1983	Johnson County	0	0%	313	100%	313
Golfview MH Park	1984	N. Liberty	0	0%	222	100%	222
Lake Ridge Estates*	1994	Johnson County	0	0%	400	100%	400
Saddlebrook	1999	Iowa City	1	1%	135	99%	136
Dakota MH Pk	?	Oxford	4	57%	3	43%	7
Clear Creek MH Park	?	Tiffin	8	13%	54	87%	62
Individual Owned*		Johnson County	4	27%	11	73%	15

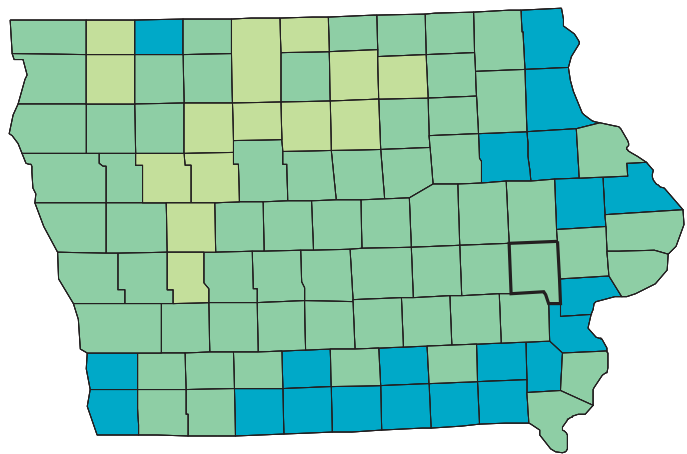
TOTALS

515	17%	2437	83%	2952
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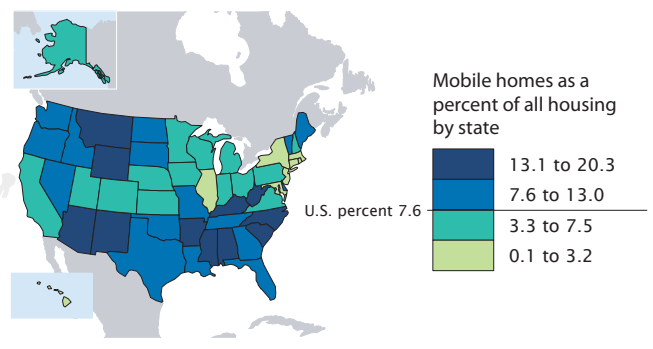
*Communities outside city limits, located in Johnson County.
Total of 1153 MH.



Based on 2010 GIS data



Mobile homes as a percent of all housing by county
 National Average 7.6
 7.6 to 20.5
 3.0 to 7.5
 0.0 to 2.9



2000 US Census

The Costs and Financing Of Mobile Homes

It is difficult and complicated to compare the full costs of MH to conventional housing. This is because of the widely differing variables at play: property ownership versus lot rents; property tax versus MH tax; interest rates on differing loans; heating/cooling, water, sewage and other utility costs; initial trucking costs and relocation costs; improvements and repairs; appreciation and depreciation; etc.

Taxes on MH differ from those levied on other property. In Iowa, MH in MH parks and communities are taxed at 20¢ per sq. ft. for the first five years. The tax then decreases to 18¢ per sq. ft. when the home is more than five years old and to 16¢ when the home is more than nine years old. (For example, a newer double-wide is about 1600 square feet. If the MH is less than five years old, the owner has an annual tax burden of \$320.) Homes located outside of mobile home parks and manufactured home communities are assessed and taxed as real estate.⁸

Conventional homes are taxed based on the value of real property and are levied in terms of dollars per \$1,000 of taxable value. In Iowa the tax rate differs in each locality and is a composite of county, city, school district, and special levies. Additionally, the taxable value is adjusted down from the market value. In this area, property is adjusted down 45%⁹. For example, a modest \$80,000 home that sets upon a \$20,000 plot in Iowa City would have a taxable value of \$36,000 + \$9,000, or \$45,000. The property would then be taxed at, for example, \$40 for each \$1000 of value, or \$1800. This is significantly higher than the MH tax; however, both taxes are income tax deductible.

A unique cost associated with MH is lot rent. This fee varies greatly depending on the size of the lot and the quality of the MH court. In Iowa City, MH lot rent is about \$315 per month.¹⁰ Annualized, the owner will pay \$3780. Most MH courts or parks require a security deposit as well.

Some rents around Iowa City are higher.¹¹ The Regency¹² park imposes rents of nearly \$400 a month. This is not because the park boasts amenities or a superior location (On the contrary, more than half of Regency's homes predate the 1976 HUD code and the park has had numerous problems with water and sanitation.) Rather, it is most likely due to the fact that the resident of these



30 years payment of \$350/month

8 "Iowa Department of Revenue - Iowa Taxes." Iowa.gov The Official Website of the State of Iowa. Web. 19 Feb. 2010. <<http://www.iowa.gov/tax/taxlaw/taxtypes.html#Mobile>>.

9 "Iowa Department of Revenue - Iowa Taxes." Iowa.gov The Official Website of the State of Iowa. Web. 19 Feb. 2010. <<http://www.iowa.gov/tax/educate/78573.html>>.

10 "Sales by Region." MH Village. Web. 19 Feb. 2010. <<http://www.mhvillage.com/>>.

11 "IVHFH MH Survey." Interviews and Surveys. 10 Mar. 2010.

12 It is a common falsehood that Regency has higher lot rents because it is Iowa City's sex offender haven. According to Johnson County GIS and the Iowa Sex Offender Registry, Regency is a restricted zone for sex offenders because the MH court also has three day care facilities. While sex offenders cannot move into Regency, there are four registered sex offenders in the court whose residency, presumably, precedes the restriction. In comparison to nearby areas, like Plum Grove/Lucas Farms (8) and Coralville Strip (13), the quantity of sex offenders is much lower.



aging MH have no place to relocate. Many parks have placed age restrictions on homes allowed into the community. Older MH are denied entry in order to maintain a higher number of newer, nicer homes. These restrictions have, in effect, trapped Regency residents and this immobility allows management to raise the rents without fear of driving away tenants.

The financing of a MH differs from that of a conventional home and the costs associated with the different types of financing are an important factor when comparing the two. Traditional mortgages are intended for land (lots), homes with permanent foundations or the purchase of both land and home. The loan can be used for the home, property and improvements. MH, if they are not placed on a permanent foundation, do not qualify for traditional mortgages. Personal property loans are the appropriate loan type for those interested in purchasing a MH and placing it on a rented lot.

Mortgage loans and personal property loans operate according to different guidelines. In order to qualify for a personal property loan, a 10% down payment is typically required, but lower down payments, higher debt ratios and credit scores are acceptable. Like a home mortgage, repayment occurs over 10-30 years and interest rates can be fixed or variable. In most cases interest rates are higher (6-7% higher) for personal property loans. If the MH borrower has bad credit or is unable to verify assets or income, rates could be even higher. Other conventional loans, like 3-2-1 buy down loans, 1 year ARMs and interest-only loans are available.

In addition to the typical personal property loans described above, MH are eligible for FHA Title I and Title II loans on 20-25 year fixed rate of interest. The program insures the lender, but does not lend the money. The VA guarantees 20-25 year loans to veterans and the Rural Development office from the USDA offers 30-year MH loans. MH are also eligible for the Federal Housing Tax Credit for buyers that have not owned a home within 3 years. This refund is 10% of selling price or a maximum of \$8,000 and will expire in April of 2010.

Comparing the long-term financial implications of the different types of loans uncovers a startling reality: MH can cost significantly more than a conventional home over the long term. For example, a conventional home loan at 7% annual interest rate for \$90,000 (\$100,000 loan with 10% down payment) will be \$598 per month, or \$215,557 over 30 years. A personal property loan at 13% annual interest rate for \$90,000 (\$100,000 loan with 10% down payment) will be \$995 per month, or \$358,408 over 30 years. The same initial investment will be, over 30 years, \$142,851 more for a MH. (Alternately, a \$54,000 personal property investment at 13% annual interest (\$60,000 with 10% down payment) will cost, over 30 years, the same as the abovementioned \$90,000 conventional home loan.) In both situations, the interest on a

home—conventional or manufactured—is tax deductible.

This significant difference between MH and conventional homes is frequently unknown or not fully realized by MH owners. Other unknown financing differences exist between MH and conventional homes. Those differences can exist in loan administration fees, credit report fees, loan preparation fees and origination fees.

Finally, the general market values of MH and conventional homes are different. As will be demonstrated, while conventional homes often appreciate in value over the years, MH do not enjoy much, if any appreciation.

Mobile Home Depreciation

Home equity is an important factor facilitating the movement of low-income homeowners into the middle class. Strong home equity provides the stability and financial clout low-income families need in order to achieve upward mobility. Unfortunately, those families who choose to purchase and live in a MH are unknowingly preventing themselves from achieving this goal. The vast majority of MH on rented land perform poorly when compared to comparable conventional homes on land in the homeowner's possession. These MH do not appreciate at the same rate as conventional homes and usually lose value, thus decreasing the homeowner's equity and making it more difficult for them to reach middle class status.

A study by the Consumers Union further confirms this claim. In 2003's "Appreciation in Manufactured Housing: A Fresh Look at the Debate and Data," a large scale survey of literature on the subject, the authors found that MH appreciate "at a rate significantly lower" than conventional homes.¹³ In fact, in their analysis of American Housing Survey data from 1985 to 1999, MH were found to have appreciated at a rate of -1.23% per year, while conventional site-built homes from the same period appreciated at a rate of 4.58%. To look at it in another way: \$30,000 invested in conventional housing in 1985 would have appreciated to \$56,157 in 1999. But in the MH market, that same \$30,000 would have fallen to \$25,227.

While it is possible for MH to appreciate at levels comparable to that of conventional homes, these instances are rare and can usually be attributed to MH dweller's ownership of the land on which the home sits. Also, positive appreciation rates are more varied, making MH an unreliable and possibly risky investment¹⁴.

Generally, MH tend to decrease the impact of factors that cause a home to appreciate and increase the impact of



\$30,000 Investment 1985-1999

13 Jewell, Kevin. *Appreciation in Manufactured Housing: A Fresh Look at the Debate and Data*. Rep. Consumers Union Southwest Regional Office, Feb. 2002. Print.

14 Jewell, Kevin. *Raising the Floor, Raising the Roof: Raising Our Expectations for Manufactured Housing*. Rep. no. 5. Vol. 6. *Raising the Floor, Raising the Roof: Raising Our Expectations for Manufactured Housing*, May 2003. Print. Public Policy Ser.



Ramp built with public funds



Frost caused ramp and MH to become misaligned



Older MHs have 1.5" walls

factors that cause a home to depreciate. In other words, positive effects on home value are minimized, while negative effects are maximized. Thus, money spent on the maintenance of a MH does not protect or increase the home's value to the same extent as it would a conventional site-built home (ibid). Contributing to this tendency, the specialized components and techniques required for MH make it difficult to properly maintain them, as does the frequent need to upgrade. The relative small square footage of MH also limits their rate of appreciation, as it makes them less desirable and encourages overcrowding, always a depreciative factor. For all of these reasons, it is difficult for owners to get a good resale price for their home relative to its initial and added costs (land rental, repairs, etc.)¹⁵.

As if that were not enough, the MH age requirements in place at many parks further complicate the selling process and drive down the home's value. Often, at the time of resale, MH deemed too old must be moved from the park. This process is costly and highly inconvenient for the MH's new owner, as the age requirements of other parks can restrict where the used mobile home can be resituated. Obviously, this requirement could dissuade some from buying a MH and create a desperate situation for the seller.

In short, a MH might not be good investment – something many families do not initially realize. Their appreciation rate is lower than that of conventional housing and usually negative. A bad purchase can cause a family to veer away from an upwardly mobile status and leave them mired in debt and logistical problems. MH ownership can be a poor way for low-income families to achieve upward mobility.

Maintaining A Mobile Home & Hidden Costs

Iowa City has many programs designed to assist low income families in making necessary improvements to their homes that they could not otherwise afford. One program, The Iowa City Housing Rehabilitation Program for Homeowners, provides grants of up to \$4,000 to homeowners for repairs. These grants are awarded to both conventional home owners and MH owners. Randy Wessling is a local general contractor who frequently repairs MH through this program. He is one of the few contractors willing to work on MH.

According to Wessling, the condition of most homes is awful. They have leaking roofs, rotten floors, bad windows, leaking pipes and improperly installed wiring and appliances. The abovementioned problems occur in both MH and conventional homes, but MH are uniquely hard to repair and more costly. According to IVHFH survey data, most residents need costly

¹⁵ Jewell, Kevin. *Manufactured Housing Appreciation: Stereotypes and Data*. Rep. Consumers Union Southwest Regional Office, 2003. Print.

repairs many times a year.

The materials used in MH differ from those used in conventional housing and are generally flimsier. Flooring or decking in conventional homes is constructed from solid wood boards or plywood while MH frequently use particle board. When boards and plywood get wet, they can dry out and retain their structural integrity. When particle board gets wet it will permanently lose its strength and require replacement.

Most conventional homes have pitched roofs while older MH have flat, metal roofs. To repair a MH roof, special roof sealants are required. Also, older MH have flimsy and energy inefficient windows which are difficult to upgrade because the walls are so thin—as little as two inches. Wood paneling rather than drywall is used on interior walls. This necessitates time-consuming repairs rather than simple patching. In addition the water heaters and furnaces of MH differ from those used in conventional houses and are more expensive.

Crown Electric also works with The Iowa City Housing Rehabilitation Program for Homeowners. One of their electricians, David, describes electrical upgrades as, “disassembly, repair and reassembly.” Because of this, it takes more time—and money—to repair MH. For example, many of the replacement receptacles and outlets are proprietary, thus making them hard to find and more expensive. Also, because the thin walls of older MH, he frequently has to surface mount new wiring because there isn’t enough space in the two inch walls, a costly procedure. In short, the list of expensive repairs is long and supports the idea that MH are more expensive than conventional homes regarding repairs.

Safety Hazards In Older Mobile Homes

The health and safety concerns that IVHFH studied in relation to MH include wind damage, fire damage, mold and water damage, and water quality. While these harmful forces can also damage traditional homes and buildings with foundations, they are particularly destructive to MH.

Wind Damage

As structures without foundations, MH are more at risk to wind damage than traditional site-built homes. According to the American Meteorological Society, “mobile home residents are injured or killed in disproportionate numbers from high wind events.”¹⁶ Even gusts of 50 mph are “approximately near the lower limit of wind speeds known to be capable of damaging mobile homes” (ibid.).

Wind damage to MH can be divided into two categories: direct damage and anchorage failure. According to a detailed



6-Layer Roof Construction!
Over the select 3/4" plywood ceiling is 1 1/2" thick spray-glass insulation, then a vapor seal guarding against condensation, followed by another 1" thick layer of insulation. Next come 1/2"-thick panels of fibrous sheathing, then the smooth, interlocking, treated metal roof, and last, a tough, reflective roof-coating material. That's how Anderson assures a leakproof, rattle-free roof, with years of trouble-free service!



Water damage on particle board under sink

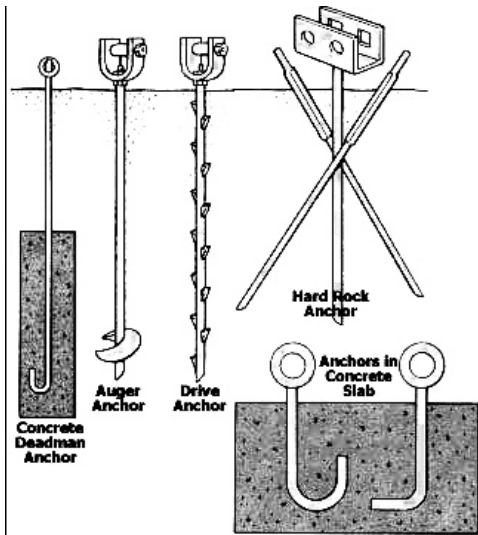
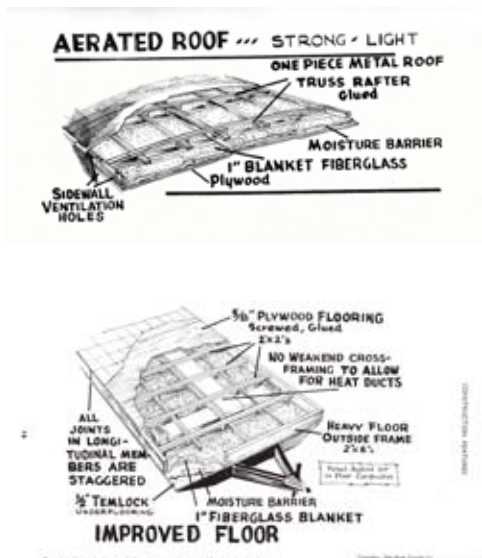


Older MHs have 2" walls



Wind damage
Source: Allan Wallace

16 “Mobile Homes and Severe Windstorms.” American Meteorological Society Home Page. American Meteorological Society, 08 Oct. 2004. Web. 02 Feb. 2010. <http://www.ametsoc.org/policy/statement_2004_mobilehomes.html>.



Older MH anchor

FEMA report on wind and MH, “direct damage often includes blown-off roof panels, loss of roof framing, loss of wall panels and framing, and breakage of unprotected windows.”¹⁷ Roofs on older MH are particularly vulnerable. A 1980 structural study of MH roofs describes the typical construction of a then-contemporary mobile home:

The roof covering of a typical mobile home is sheet metal fastened to the top member of the mobile-home truss, generally by stapling. The roof metal is usually not continuous, and because of the free movement of interlocking joints, the roof of a typical mobile home is not considered structurally significant.¹⁸

Given this construction, it is understandable that wind might directly damage the roof structure of older MH.

Wind can also cause the anchorage system on a MH to fail. MH make use of a variety of anchors, but most often they are evenly spaced metal rods connecting home to the ground. To cite the FEMA report on wind damage:

Anchorage failures are much more common in older homes than in newer homes. Historically, it appears that minimal attention was paid to the anchorage of these homes compared to the observed anchorages in newer homes.¹⁹

If these older MH have improperly placed anchors, or are even without anchors altogether, then they can fail or move during high-wind events, causing damage to the home itself and potentially to those inside.

It is worth noting that a damaged MH creates a large amount of debris in a wind storm. While this may be true of all buildings, a MH is without a foundation and more susceptible to wind. The debris can fly around and damage other homes, or pierce windows and risk injury to people inside.

Many of the MH communities in Johnson County do not have shelters for their residents during storms or high wind events and surveyed residents were scared by this reality. Lake Ridge and Bon Aire offer their residents concrete storm shelters, while most others do not.

17 United States of America. Federal Emergency Management Agency. Understanding and Improving Performance of Older Manufactured Homes During High-Wind Events. Vol. 5. FEMA, 2007. Print. Tornado Recovery Advisory.

18 Fritz, T.W. “Structural Testing of Mobile-Home Roof/Ceiling Assemblies.” Full-Scale Load Testing of Structures. Vol. STP 702. American Society for Testing and Materials, 1980. 137-137. Print.

19 United States of America. Federal Emergency Management Agency. Understanding and Improving Performance of Older Manufactured Homes During High-Wind Events. Vol. 5. FEMA, 2007. Print. Tornado Recovery Advisory.

Fires

Another safety concern associated with older MH is fire. MH fires “claim the lives of 345 Americans each year and injure 765 more.”²⁰ The death rate from a fire in a “manufactured home is twice the death rate in other types of homes.”²¹ The distinction between “pre-standard” and “post-standard” MH also becomes very important when considering fire damage. In 2003 the National Fire Protection Association released a report entitled “Manufactured Home Fires,” addressing the subject of fire in relation to older homes. The report states: “Manufactured homes built after the introduction of the [1976] HUD standards have lower rates of civilian deaths per fire and civilian injuries by fire.”²² This is most likely because:

Post-standard manufactured homes are more likely to have fires confined to room of origin... HUD Standards provide requirements that are intended to slow or limit the spread of a fire by such means as flame spread rating requirements for interior finish materials on exposed walls, columns, partitions, and ceilings... wall and floor coverings near central heating units or water heaters, interior finishes exposed to cooking ranges, kitchen cabinet surfaces, and plastic bathroom fixtures.²³

A MH fire recently took place at Unit No. 42 in Forestview Trailer Court.²⁴ No. 42 was a single-wide MH. Two adults and six children were living in the home and luckily escaped without injury. The fire caused irreparable damage to the MH, and spread to the corner of a neighboring MH and a nearby automobile. The Iowa City Fire Department (ICFD) estimates the damage at \$30,000.

IVHFH spoke with a representative of the ICFD regarding the Forestview fire, and MH fires in general. The cause of the Forestview fire was the electrical system. One resident of the MH saw sparks flying from an outlet before the fire. Many older MH have faulty wiring that can potentially cause fires, as will be discussed in the following section.

The firefighter that IVHFH interviewed stated that it seemed more dangerous to fight MH fires than to fight fires in conventional homes. Fire spreads more rapidly due to its lightweight construction and size, and can total a unit in a matter



1963 trade magazine advertisement



Unit number 42 in Forestview was registered as a 1965 Fernwood



Williamsburg, Ia fire on February 24, 2010 (one death)
Gazette photo

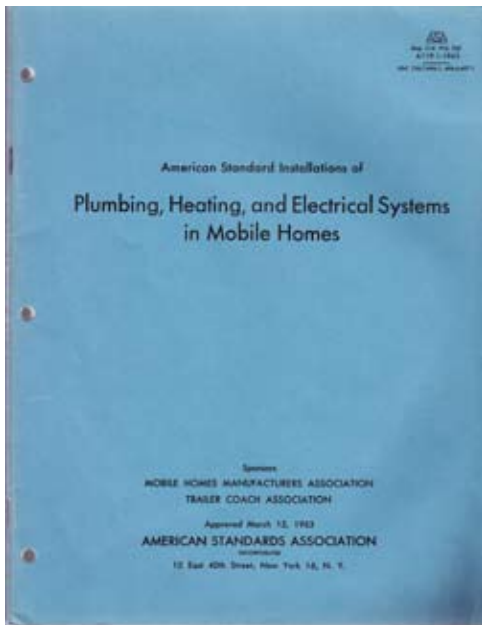
20 United States of America. U.S. Fire Administration. Live Safely in Your Manufactured Home: A Factsheet on Manufactured Home Safety. U.S. Department of Homeland Security, 2006. Print.

21 Ideas You Can Use: Fire Escape Plans. Manufactured Home Fire Safety. Print.

22 Hall, John R. Manufactured Home Fires. Rep. Quincy: National Fire Protection Association Fire Analysis & Research Division, 2005. Print.

23 Hall, John R. Manufactured Home Fires. Rep. Quincy: National Fire Protection Association Fire Analysis & Research Division, 2005. Print.

24 KCRG-TV News. Eight Displaced After Iowa City Mobile Home Fire. Local News. KCRG-TV News, 28 Jan. 2010. Web. 11 Feb. 2010. <<http://www.kcrg.com/news/local/82913967.html>>.



MH specifications in the 1960's called for Aluminum wiring



MH electrical wiring



Wiring and plumbing under a Johnson County mobile home. 28 Feb. 2010.

20 "Man Dies in Mobile Home Fire Near Williamsburg." *The Gazette*. 27 Feb. 2010. Print. 5 Mar. 2010.

of minutes. In essence, "it is like crawling into an oven."²⁵

Iowa City usually sees two to three MH fires per year. While producing this report a MH fire in neighboring Williamsburg resulted in a fatality²⁶.

Electrical Wiring

Aluminum wiring was used in both conventional homes and MH throughout the 1960's into the early 1970's. Aluminum wiring is especially problematic when used in screw terminals, like outlets, that were designed for copper. Over time the connections loosen creating the potential for electrical fires. ***The U.S. Consumer Product Safety Commission research found that homes wired with aluminum wire manufactured before 1972 are 55 times more likely to have one or more connections reach "Fire Hazard Conditions" than homes wired with copper.***

Many MH manufacturers stopped using aluminum wiring in 1971, and all by 1976; however, it is unknown how many older MH, if any, have upgraded their wiring. Also, older systems tend to be designed for lower electrical demands. Industry standards throughout the 1960's and into the 1970's required three branch circuits with a total 60-amp load. Modern MH have 200-amp service, as do smaller, conventional homes.

While aluminum wiring and under-sized electrical service are problems for both conventional homes and MH, MH may be more susceptible to fire risk for multiple reasons. First, the wires are inaccessible for inspection and easy maintenance because their electrical systems are integrated into wall and roof systems. While inspecting and replacing wiring in conventional homes is costly, it can be done without large-scale destruction of expensive building systems. In MH, the complete destruction of the roof system may be required. Partly because of these factors, many Iowa City electricians do not work in MH.

Second, older MH have poor insulation in their walls, ceilings and floors. This low resistivity to exterior temperature change makes them susceptible to rapid interior temperature changes and thus requires intense heating and cooling to achieve comfort. Space heaters, typically 1500-3000 watts (12.5-25 amps at 120V service), place disproportional electrical demands on old systems. Additionally, older MH have under insulated pipes under the floor systems. Heat coils, heat tape and space heaters are used to reduce the threat of freezing pipes. This threat is real: most surveyed residents had frozen pipes from time to time.

Water And Mold

Another hazard associated with MH is mold. Improperly installed MH are especially at risk for mold contamination. If a

home is placed on land that is not level, water can puddle on the ground beneath it, causing moisture to be absorbed up into the insulation and flooring. In this dim, damp environment mold can flourish, spreading through the floor and into the home itself. As it spreads, mold produces allergens and potentially toxic substances known as mycotoxins, which pose serious health hazards to human beings. Additionally, uneven ground can cause structural damage to the walls and floor, giving moisture another way in. Since most mobile home floors are made of particleboard, the floor will begin to disintegrate and mold after it first gets wet.

The dangers of mold exposure have been well documented elsewhere and include everything from respiratory problems, rashes and eye-irritation, to migraines, fungal infection and (according to some research) death. People with existing respiratory problems, such as asthma, are more at risk, as mold has been known to exacerbate these problems. Prolonged exposure to mold, especially in an enclosed space, only increases the severity of these symptoms. As a result, MH residents—especially children and elderly—are particularly vulnerable.

Mold is also a concern in relation to cladding. Some older siding and weatherproofing can actually trap moisture and ultimately cause mold to grow on the side of the structure. In a 1995 article entitled “Moisture and Mobile Home Weatherization,” Prof. George Tsongas writes that “Vapor retarders located on the exterior of wall cavities can cause serious moisture problems, including structural deterioration, in mobile homes located in northern climates.”²⁷ One case study from Michigan, Minnesota and Wisconsin documents the use impermeable Exterior Vapor Retarders, or EVRs, just underneath the siding. The siding and EVRs trap moisture close to the walls and bottom plates, resulting in decay and structural damage to the MH. Tsongas writes, “The result was severe and extensive rotting of the plywood sheathing, which occurred over a period of 20 years... Moreover, the wet wall conditions led to substantial mold growth which seriously affected the health of many of the occupants” (ibid).

Mold has become a problem in other Midwestern states. Iowa MH might could easily have similar problems with moisture and the growth of mold under their siding. No research has been carried out in regards to mold in Johnson County MH, but the topic is a cause for concern.

Water Quality

Many times, large MH parks opt to build and maintain their own water systems, separate from the general municipal water supply. Six parks do this in the Iowa City area, including Western Hills Mobile Estates, Breckenridge Estates, Lake Ridge Estates,

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE CONSENT ORDER**

IN THE MATTER OF:

Regency of Iowa, Inc.
Johnson County, Iowa

**ADMINISTRATIVE
CONSENT ORDER
NO. 2009-WW-09**

TO: Regency of Iowa, Inc.
c/o George Cradow President
40 N 4th St
Carbondale, CO 81623

I. SUMMARY

This administrative consent order (order) is entered into between Regency of Iowa, Inc. (Regency) and the Iowa Department of Natural Resources (Department). The parties hereby agree to the issuance of this order. Regency agrees to comply with its National Pollution Discharge Elimination System (NPDES) permit, to perform and report the monitoring required in its permit, to comply with effluent limits, timely submit its Monthly Operation Reports (MORs) and pay a penalty of \$4,000.00. In the interest of avoiding litigation, the parties have agreed to the following provisions.

Any questions or response regarding this order should be directed to:

Relating to technical requirements:
Russell Royce, Environmental Specialist
IDNR Field Office 6
1023 West Madison St
Washington, IA 52358-1623
Ph: 319/653-2135

Relating to legal requirements:
Carrie Schoenebaum, Attorney at Law
Iowa Department of Natural Resources
Henry A. Wallace Building
Des Moines, Iowa 50319-0034
Ph: 515/281-0824

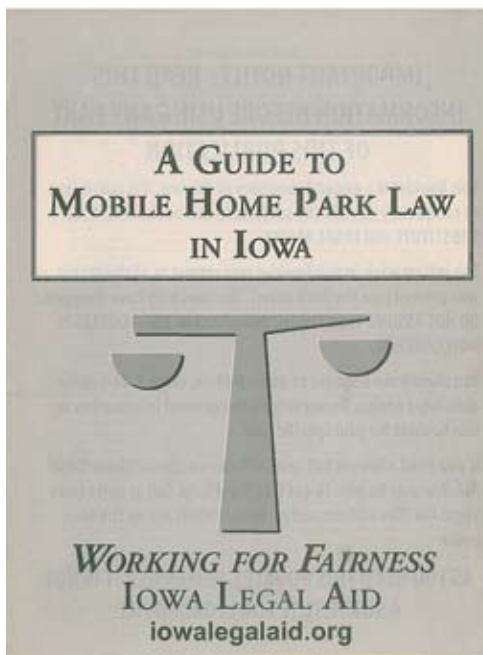
II. JURISDICTION

The parties hereby agree that this order is issued pursuant to Iowa Code section 455B.175 which authorizes the Director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division III, Part 1, and the rules promulgated or permits issued pursuant thereto, and Iowa Code section 455B.109 and 567 Iowa Administrative Code (IAC) chapter 10, which authorize the Director to assess administrative penalties.

DNR administrative consent order documents repeated violations

²⁷ Tsongas, George. “Moisture and Mobile Home Weatherization.” Home Energy Magazine Online July & Aug. 1995. Home Energy Magazine. Web. 11 Feb. 2010. <<http://www.homeenergy.org/archive/hem.dis.anl.gov/eehem/95/950711.html>>.

MHs in Iowa City Limits	1799
MHs outside Iowa City	1153
MHs in Johnson County	2952



Modern Manor, Sunrise Village and the Iowa City Regency MH Community. If these independent water systems are poorly monitored and maintained, the tenants of these parks face increased potential exposure to many different contaminants.

The Regency Community has the worst health and safety record by far. Over the past three years the water supply of the park has been found to contain no less than six contaminants exceeding the legal limits established by the Safe Drinking Water Act.²⁸ The park’s wastewater is also poorly managed. In August of 2009, the Iowa Department of Natural Resources found concentrations of fecal coliform and ammonia pollutants in excess of legal limits. This wastewater was discharged into the Iowa River, thus affecting the general water supply.²⁹

For the roughly 700 residents of Regency, these water problems have had a serious impact on their quality of life. Some residents have been forced to resort to bottled water, while others choose to bathe at the homes of friends. Many feel that the water—which ranges in color from clear to orange and in smell from bleach to rotten eggs—is unsuitable even for their pets. These conditions were documented in a recent Gazette article.³⁰

These independent water systems poses a serious threat to public health. Regency, owned by the Colorado-based corporation the Churchill Group, has consistently demonstrated an unwillingness to seriously address its environmental and sanitary violations. Its water quality problems only serve to further confirm its reputation as one of the most poorly run and dilapidated MH communities in the area.

Mobile Home Communities: Survey

There are twenty MH communities in Johnson County. Some are within city limits, but many of them are located just outside of Iowa City, Coralville, and North Liberty. The Baculis, Bon Aire, Forestview, Hawkeye, Hilltop, Michael F Camp, Saddlebrook and Thatcher parks are inside of Iowa City, while Western Hills Estates is the only community in Coralville. Golfview and Holiday MH Court are both within North Liberty. The other nine communities exist outside of city limits, in other parts of the county. According to IVHFH’s collected data, 1153 MH are located outside city limits, in Johnson County.

Mobile Home Communities: Eviction

The average tenant owns his or her MH, but rents the

28 Duhigg, Charles, Matthew Ericson, Tyson Evans, Brian Hamman, and Derek Willis. “Toxic Waters.” Water Systems in Johnson County, IA. The New York Times, 23 Dec. 2009. Web. 11 Feb. 2010. <<http://projects.nytimes.com/toxic-waters/contaminants/ia/johnson>>.

29 “Discharges from Iowa City Mobile Home Park Exceed Limits, State Says.” The Gazette Online. 19 Aug. 2009. Web. 11 Feb. 2010.

30 Hennigan, Greg. “Struggles Continue at Troubled Iowa City Mobile Home Park.” The Gazette. 25 Sept. 2009. Web. 11 Feb. 2010. <<http://gazetteonline.com/local-news/2009/09/25/struggles-continue-at-troubled-iowa-city-mobile-home-park>>.

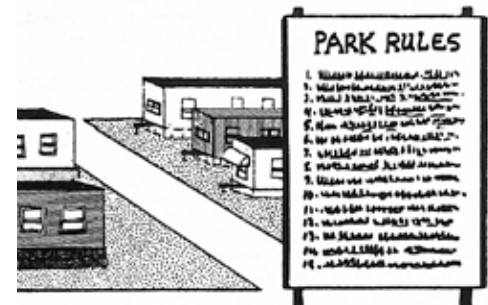
land on which it rests from the owner of the MH community. The landlord will typically pay for upkeep of roads, amenities, and some general maintenance. Unfortunately low-income MH tenants are often at a disadvantage when it comes to renting and eviction proceedings. Imagine a scenario in which a tenant is delinquent on one month's lot rent. While traditional home owners in foreclosure are given several months to make arrangements, owners of MH are given three days after the date of judgment. They are at risk to lose everything – even if they own their home. As stated in a recent Drake University study:

In three days' time the mobile home owner-tenant must either move the mobile home, sell it in its place, or abandon it. Logic would dictate that a mobile home owner-tenant who is not able to pay rent for the pad will likely not be able to pay [at least a thousand dollars] to have it moved. Therefore, the mobile home owner-tenant must try to sell the mobile home within three-days' time. When the mobile home owner-tenant tries to do so, she cannot assure the prospective buyer that he will be able to keep the home on site. The park owner may choose not to agree to a lease with the new owner. The park owner may have multiple reasons not to offer space to prospective purchasers. If the mobile home is old or dilapidated, the park owner might not want the home in the park because 'the newer the mobile homes in the park, the better is the appearance of the park.' Or the park owner might envision acquiring the mobile home through an abandonment proceeding.³¹

The landlord essentially controls the abandonment proceedings, and in some cases can even take possession of the ex-tenant's personal property. This is an entirely plausible situation, even under the Iowa Legislature's 1978 Mobile Home Parks Residential Landlord and Tenant Act. A 2003 amendment "provides a process for either party to delay the removal of a manufactured or mobile home for sixty days after judgment for eviction in an action for forcible entry or detainer," but "the sixty days to sell the mobile home in its place is completely dependent on the cooperation and the consent of the park owner" (ibid). This three day timeframe in Iowa is very short, compared to other states that provide five, ten and even thirty days' notice.³² In essence, "Many safeguards are in place to help protect the traditional homeowner from foreclosure and loss of equity in her



Sign at Thatcher MH park



Cartoon from Iowa Legal Aid

31 Fictner, Royce J. The Iowa Mobile Home Park Landlord-Tenant Relationship: Present Eviction Procedures and Needed Reforms. Thesis. Drake University, 2004. Drake Law Review, 2004. Print. 4.

32 Fictner, Royce J. The Iowa Mobile Home Park Landlord-Tenant Relationship: Present Eviction Procedures and Needed Reforms. Thesis. Drake University, 2004. Drake Law Review, 2004. Print. 5.



Ground-breaking for Kindon Family



Kindon Family



New Kindon home.

home, but unfortunately, no such safeguards are in place for the mobile home owner-tenant” (ibid.).

The Benefits Of Home-Ownership

At Iowa Valley Habitat for Humanity we believe that quality housing is crucial to building and maintaining strong, vibrant communities. This belief is backed by many studies over the years which show that homeownership brings with it numerous and varied benefits. Increased homeownership has been linked to everything from lower community crime rates, to increased participation in civic affairs, and even to better scholastic performance in children.

Our partner families are hardworking, responsible people who have been unjustly excluded from the American dream of homeownership. They take great pride in owning their own home. The parents are grateful that they can finally offer their children a secure and stable environment in which to live. It is no surprise then that homeownership has been associated with increased employment and educational opportunities, as well as improved household health.

The recent experience of the Kindon family, who moved into their Habitat-built home in the winter of 2008, is a perfect illustration of this point. The family of three had been living in a dilapidated MH for more than thirty years old, enduring rotting floors and cramped living conditions. As a partial result of this, the children’s grades and general well-being suffered. Their mother, Vala Calkins-Kindon, tried desperately to improve their situation. She applied for a Federal Housing Authority loan but was turned down because she did not meet their income requirements. Fortunately, a co-worker told her about Habitat for Humanity and our affiliate was able to step in and make her dreams come true. The result was one of our greatest success stories. The scholastic performance of both children improved dramatically and their home life was changed for the better as each member of the family experienced the pride and comfort that comes with homeownership. The shift was so dramatic that it was even the subject of a Gazette article in September of 2009.³³

That is just one example of the positive impact of Iowa Valley Habitat for Humanity. So many of our families have similar stories, and those experiences only serve to confirm our belief in the benefits of homeownership. Quality housing and strong families are the building blocks of a stable community. We at Iowa Valley are proud that, family by family, house by house, we are helping build that community.

33 Ford, George. “New House Brings Major Change for Iowa City Teen, Family.” The Gazette Online. 11 Sept. 2009. Web. 11 Feb. 2010. <<http://gazetteonline.com/life-home/featured-life-home/2009/09/11/videonew-house-brings-major-change-for-iowa-city-teen-family>>.

Recommendations

IVHFH sees its mission as promoting affordable housing in the community. To that end, it recommends that all citizens of Johnson County take a closer look at the issues facing older MH. We recommend that Johnson County develop a long term plan to deal with these older homes.

1-Existing residents of older MH, if they are not already aware of the health hazards, should be provided with information and access to alternative forms of housing. These homes face many safety hazards, and repairing them is both difficult and costly.

2-Potential MH buyers need to be aware of how difficult MH are to maintain, how MH are financed, and the reality of living in a MH community.

3-Institutions or people selling MH should be required by law to inform potential buyers that MH may cost more than conventional homes.

4-Create a general fund devoted to getting rid of dilapidated and substandard MH, while at the same time taking care to provide housing for displaced residents. In this way, the worst MH units could gradually be eliminated.

5-More immediately, the residents of Iowa City Regency MH community should have access to clean, uncontaminated water. Regency's residents pay the highest lot rent in Johnson County, and should have water free of ammonia and fecal coliforms.

IVHFH also urges the state of Iowa's Legislature to further amend the Mobile Home Parks Residential Landlord and Tenant Act. Three days is not enough time for a low-income resident to arrange to move or sell their home following the termination of a rental agreement.

In conclusion, if Johnson County and its cities are to develop into a stronger community, the issues surrounding MH must be addressed. Sadly, the hazards and indignities documented in this report disproportionately affect our society's most vulnerable members--the working poor and the elderly. Because of this, these problems are a matter of conscience and should not be disregarded by local authorities. MH have been ignored for too long and it is time this issue was given the attention it deserves.

We would like to thank the City Assessor's Office of Johnson County and the Neighborhood Center of Johnson County for their help, as well as the city officials and contractors who provided their insight and information.



Habitat home in Iowa City under construction in 2009



Finished IVHFH home

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