
**Survey of Multifamily Building Owners and Managers in Minnesota
Regarding Movement of Secondhand Smoke in Buildings
and Designation of Smoke-Free Buildings**

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Center for Energy and Environment



Association for Nonsmokers - Minnesota

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and Designation of Smoke-Free Buildings**

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EXECUTIVE SUMMARY

Objectives

This study was completed as part of a research project focused on environmental tobacco smoke (ETS) in apartment buildings. Minnesota renters, who comprise 25.4% of Minnesota households and who disproportionately include minorities, low income households, and young adults, have no guarantee of a smoke-free place to live. As a result, they are sometimes exposed to environmental tobacco smoke (ETS) entering their apartments from other apartments, from hallways or other common areas of their building, or from balconies, patios or grounds outside the building -- a phenomenon that we refer to here as “ETS transfer” or “secondhand smoke transfer.” The goal of this project is to build a sound base of knowledge that will facilitate two types of actions to reduce renters’ exposure to environmental tobacco smoke (ETS) in their homes:

- designation of smoke-free apartment buildings, and
- treatment of smoking-permitted buildings to minimize ETS transfer.

This report summarizes the results of the first of six research tasks: the qualitative interviews of multifamily building owners and managers. The success of voluntary efforts to increase the number of smoke-free rental properties is ultimately dependent on property owners’ willingness to offer them. Similarly, the success of voluntary efforts to reduce ETS transfer in smoking-permitted buildings will often depend on property owners’ willingness to invest in the necessary building modifications. It is therefore essential that the other research activities conducted as part of this project address owners’ concerns and meet their information needs. The purpose of this task is to develop a thorough understanding of these concerns and needs.

Methodology

Since the goal of this task is to identify and elucidate a broad spectrum of perceived barriers and information needs, a qualitative approach was used. Samples were selected to assure a diversity of types of owners and therefore of opinions, rather than to assure a statistically representative sample. Data collection focused on in-depth and partially open-ended discussion with a small number of owners, rather than shorter, closed-ended interviews of a large number of owners.

The population of interest for this task is comprised of those individuals who make the key decisions about management of rental properties. In some cases, these individuals are the owners themselves. In other cases, they are employees of property management companies who have broad decision-making authority in operating the properties. For convenience in this report, all of these individuals are referred to simply as “owners.”

Three sample groups were selected: (1) a general sample of private owners, drawn primarily from the membership database of the Minnesota Multi Housing Association (“Private, general”), (2) a sample of private owners known in advance to have smoke-free buildings, provided by

ANSR (“Private, KSFB”), and (3) a sample of public owners chosen from the membership directory of the Minnesota Chapter of the National Association of Housing and Redevelopment Officials (“Public”). The first and third sample groups intentionally over-sampled large owners, since their experience represents and their opinions affect a relatively larger proportion of the rental market. The second group simply included all smoke-free owners of whom ANSR had knowledge. Data were collected through telephone interviews conducted by interviewers experienced in interviewing executive-level businesspeople. In total, 49 surveys were completed, 26 from the Private, general sample, 11 from the Private, KSFB sample, and 12 from the Public sample.

The Respondents’ Buildings

The respondents manage a total of 899 multifamily buildings in the state, and 27,116 rental units in those buildings. This constitutes 7% of the total multifamily rental units in Minnesota, based on the 2000 Census. Forty-three percent of the owners we interviewed manage 250 residential units or more in Minnesota, 35% manage 21 to 249 units and 22% manage 20 units or fewer. About 7% of the units the respondents manage are in 2-to-4 units buildings, about 4% are in 5-to-9 unit buildings and about 89% are in buildings of 10 units or more. This distribution under-represents smaller buildings, which are disproportionately owned by smaller operators who were intentionally under-sampled in this survey. Fifty-nine percent of the units managed by the respondents are in unsubsidized housing, 28% are in HUD¹ Low Rent Public Housing, 9% are in HUD Section 8 project-based housing, and 4% are in other publicly-assisted housing. This distribution over-represents publicly-assisted housing, because enough public housing entities had to be interviewed to cover a reasonable cross-section of that market. Of the unsubsidized buildings operated by the respondents, 18% are Class A, 23% are Class B, 44% are Class C and 15% are Class D.²

Movement of Secondhand Smoke in Smoking-Permitted Buildings

More than a quarter (27%) of the owners interviewed identified tobacco smoke odor as the most common source of objectionable air moving into individual apartments from elsewhere on the premises in buildings they manage. The only more frequently mentioned source of objectionable air was food odors, identified by 45% of owners. Tobacco smoke odors and cooking odors were also the most often mentioned as other significant sources of objectionable air (each mentioned by 14% of owners). No other odor came close to being mentioned as often as these two.

When asked how many of their buildings experience ETS transfer on a regular or recurring basis, 4% of respondents said that most of them do, 14% said some of them do, 33% said a few of them do, and 45% said none of them do. To gauge the effect of ETS transfer on owners’ business interests, we asked about its impact on tenants’ decisions to rent an apartment or to move from an apartment, and about the staff time required to resolve tenants’ complaints about it. Among the owners who said at least a few of their buildings experience ETS transfer regularly, 7% said

¹ U.S. Department of Housing and Urban Development.

² Class is an indicator of the age, location and amenities of a building and is directly related to rent charged. See the full report for further details.

that, in those buildings, it is often a significant factor in potential tenants' decision whether to rent. Fifteen percent said it sometimes is, 41% said it rarely is, and 33% said it never is. Nineteen percent of these owners said that secondhand smoke movement is sometimes a significant factor in existing tenants' decision to move, while 48% said it rarely is and 30% said it never is. Nineteen percent said that, in buildings where it occurs regularly, ETS transfer sometimes requires significant staff time to resolve tenants' complaints, 59% said it rarely does, and 15% said it never does.

Owners who have designated at least one smoke-free building were much more likely than owners who have not to perceive movement of secondhand smoke into apartments as "very important" relative to other rental housing issues (65% vs. 21%). They were also more likely to consider movement of secondhand smoke into apartments to be a major health issue for tenants (40% vs. 17%).

A quarter of owners interviewed said they would be very interested in learning about ways to reduce movement of ETS and other objectionable air into apartments and 41% said they would be somewhat interested. However, the owners who have at least some smoke-free buildings were significantly more likely to be very interested than the owners with no smoke-free buildings (40% vs. 14%). The benefits owners saw in making modifications to reduce ETS transfer were primarily a better environment for tenants, fewer hassles between tenants over objectionable air, lower maintenance costs, and the ability to attract "better" tenants or more non-smokers. Their concern about such modifications was overwhelmingly the cost, with disruption of tenants' lives a distant second. Sixty-nine percent of owners said they would be willing to spend less than \$250 per apartment to substantially reduce movement of secondhand smoke or other objectionable air into them.

When asked what is the most common route by which secondhand smoke gets into tenants' apartments from elsewhere, 41% of respondents said via the corridors/hallways, 22% said via the mechanical ventilation system, 15% said via cracks in walls, floors, etc., and 7% said via open windows.

Direct Experience with Smoke-Free Buildings

We were able to gather information on actual experience with smoke-free buildings from 20 owners, 14 who have fully implemented smoke-free policies and six who are gradually phasing such a policy in. These 20 owners have designated a total of 110 buildings in Minnesota smoke-free.

Fourteen of these owners said that they had designated unsubsidized buildings smoke-free, and seven said they had designated some kind of public or publicly-assisted housing smoke-free. The buildings designated smoke-free have included buildings that are mostly for seniors, mostly for families with children, and mostly for non-senior households without children. The unsubsidized buildings designated smoke-free have included Class A, B, C and D buildings.

The owners who have designated smoke-free buildings in Minnesota have had positive experiences with them. Nineteen of the 20 owners of smoke-free buildings said they are very

likely to continue offering smoke-free rental buildings or units in the future, while only one said s/he was somewhat likely to continue offering them. Four owners said that the smoke-free designation had decreased their vacancy rate and 15 said it had had no effect on vacancy, while only one said it had increased his vacancy rate. Likewise, five owners said the smoke-free designation had decreased turnover and 14 said it had had no effect on turnover, while only one said it had increased turnover. Nineteen owners said the smoke-free designation had had no effect on the amount of rent they could charge, while one said s/he had been able to increase the rent by \$10 per month. Eleven owners said that the smoke-free designation had decreased the amount of staff time required to manage the building, while eight said it had had no effect and only one said it had increased the amount of staff time required. When the eleven owners who had seen a decrease in staff time required were asked why, they overwhelmingly pointed to decreased time spent preparing apartments for turnover. They also mentioned less cleaning time, less leasing time and fewer tenant complaints. The one owner who said staff time had increased said this was due to the need for someone to monitor and enforce the no-smoking rule. Only three of the owners said that the smoke-free designation had led to any complaints from tenants. One of these owners said that s/he had had to “enforce our lease” when people violated the smoke-free policy, but no owners reported any legal actions against them. All of the owners who reported negative effects are gradually phasing in a smoke-free policy and have not yet fully implemented it.

The smoke-free owners have generally used restrictions in the lease coupled with signage in the buildings to enforce the smoke-free designation.

Perceptions of Smoke-Free Buildings among Owners with No Direct Experience

Among the owners who have never designated any smoke-free buildings themselves, almost three quarters (72%) are not aware of any smoke-free buildings in Minnesota. A little more than half (52%) of the owners who have not designated any smoke-free buildings think that there is a viable market for smoke-free rental housing in the market segments they rent to, while 31% do not think there is, and 17% said they don't know. (By contrast, 100% of the owners of smoke-free rental housing think that there is a viable market for it in the market segments they rent to.) Seventy-two percent of the owners who have never designated a smoke-free building think that the issue of smoke-free rental housing will become more important in the future.

In spite of their views that there is a viable market and that the issue will become more important in the future, these owners expressed little interest in designating any of their buildings smoke-free: only 3% were very interested and 14% were somewhat interested, while 41% were a little interested, and 41% were not at all interested. Two-thirds of these owners said their most important concern about smoke-free designation was that it would increase the vacancy rate or decrease the size of the market to whom units could be rented. Another 21% said that legal costs related to enforcement were their most important concern, while 10% said that discrimination was their most important concern.

The owners who had not designated any smoke-free buildings had considerably more negative expectations of the effects of smoke-free designation than is borne out by the experience (albeit

limited) of smoke-free owners in Minnesota to date. Fifty-eight percent of private owners and 30% of public owners who had not designated any smoke-free buildings said that smoke-free designation would increase vacancy rates, while only 5% of smoke-free owners said that smoke-free designation actually had done so. Sixteen percent of private owners and 20% of public owners who had not designated any smoke-free buildings thought that doing so would increase turnover, whereas only 5% of smoke-free owners said this had occurred. Thirty-two percent of private owners and 20% of public owners who had not designated any smoke-free buildings thought that doing so would increase the amount of staff time required to manage a building, whereas only 5% of smoke-free owners said this had occurred. Only 21% of private owners and 10% of public owners thought smoke-free designation would decrease the amount of staff time required to manage a building, whereas 55% of smoke-free owners said this had occurred. Forty-seven percent of private owners and 20% of public owners said that smoke-free designation would increase their legal risks and costs. This question was not asked of smoke-free owners in the same way, but only three of the 20 smoke-free owners reported any complaints from tenants, with only one of these saying he had had to “enforce his lease.” None of the smoke-free owners reported any lawsuits against them.

The potential benefits of smoke-free designation perceived by the owners who had never done it were generally lower maintenance costs, attracting more non-smokers, fewer hassles between tenants over smoke, a better environment within the properties and better health for tenants. About a quarter of these owners, though, saw no potential benefits to smoke-free designation.

Information to Guide Later Tasks of the Research Project

The owner interviews provided additional information relevant to the upcoming renter survey, legal research, buildings research and financial analysis.

The questions these owners are most interested in asking tenants about this issue are: how important a smoke-free building would be to them; whether they would be willing to pay more, and how much more, to live in a smoke-free building; whether they have experienced a problem with ETS transfer; and whether they would be willing to move to a different location if it were smoke-free.

The legal issues these owners are most interested in knowing more about are: the legal recourse owners have to enforce a smoke-free rule; whether smoke-free designation constitutes discrimination against smokers or against protected classes who are more likely to smoke; how much liability they might have if a tenant claimed to have gotten sick from living in a smoking-permitted building, and how much liability they would have if someone smoked in a building that they had designated smoke-free. Quite a few owners said they would be more likely to designate smoke-free buildings if MHA, Mn NAHRO and others were to develop a model smoke-free lease clause, which is one of the planned outputs of the legal research. Half of the owners without smoke-free buildings felt that changes in statutes or regulations would be needed in order for them to designate smoke-free buildings. Such potential changes are also one of the planned outputs of the legal research.

With regard to the buildings research, these owners were most interested in knowing how much the building modifications would cost, how much the modifications would reduce the problem and what the modifications would be. Twenty-eight of the 49 owners indicated that they would be interested in providing a building for testing through the project.

Owners who have designated smoke-free buildings said that painting and decorating costs, general repair costs, insurance costs and gross potential rent are the budget items most likely to be changed by smoke-free designation. This provides direction for the financial analysis of smoke-free designation. In addition, follow-up with the smoke-free owners may also prove to be a source of quantitative information on financial impacts.

Discussion

Owners are certainly aware of some problems with secondhand smoke transfer in rental properties in Minnesota: about 41% mentioned tobacco smoke odor as either the most common source or an additional significant source of objectionable air in buildings they manage, and over half said that at least a few of their buildings experience ETS transfer on a regular or recurring basis. ETS transfer also appears to have a small but noticeable impact on issues important to apartment owners' business, with about one in five saying that it sometimes or often is a factor in potential tenants' decision whether to rent; is a factor in existing tenants' decision to move; or requires significant staff time to resolve complaints.

The routes of secondhand smoke movement identified by owners as the most common are related to the design, construction and operation of the building and its ventilation systems, which suggests that movement of secondhand smoke could be reduced through appropriate treatments. Only a quarter of owners interviewed said they would be very interested in learning about ways to reduce transfer of secondhand smoke and other objectionable air in apartment buildings, though, and over two-thirds said they would be willing to spend less than \$250 per apartment to do reduce this air movement.

Owners who have already designated at least one smoke-free building are much more likely to see ETS transfer as very important and as a major health issue for tenants, and are much more likely to be very interested in learning about ways to reduce ETS transfer. Among other owners, only about one in six sees ETS transfer as a major health issue for tenants, and only one in seven is very interested in learning about ways to reduce it.

The 20 smoke-free owners we were able to interview exceeded the number we had expected, and provided a substantial amount of information on experience with smoke-free designation in Minnesota. These owners' experience with smoke-free housing appears to be strongly positive, and indeed, all but one of these owners said they are very likely to continue offering smoke-free buildings or units in the future.

There is a general perception that publicly-assisted housing is subject to statutory and regulatory constraints that would make smoke-free designation more difficult. This survey shows that there is some track-record of designating subsidized housing in Minnesota smoke-free. Whether this

is consistent with the statutes and regulations governing this housing will be assessed during the legal research portion of the project.

It is sometimes suggested that certain classes of buildings, or buildings with certain types of tenants, are easier to designate smoke-free than others, that is, that the smoke-free designation might be less likely to lead to vacancy and turnover problems, or might be easier to enforce, etc. with certain types of clientele. Given the mix of buildings they have designated smoke-free, the positive experience of smoke-free owners interviewed here indicates that smoke-free designation can be successful across a range of building classes (corresponding directly to rent levels and, by extension, to tenant incomes) and in properties targeting tenants in various stages of life.

Three quarters of the owners who have never designated any smoke-free buildings are also unaware of any such buildings in Minnesota, and this is significant, since it means that they are not aware of the limited but strongly positive experience with smoke-free designation. These owners have a very low level of interest in designating smoke-free buildings, and have considerably more negative expectations of the effects of smoke-free designation than is borne out by the experience of smoke-free owners in Minnesota to date. It is to be hoped that disseminating information on the successful experiences of smoke-free owners and generating market research quantifying renters' interest in smoke-free housing will increase the level of interest in it among Minnesota owners.

BACKGROUND

Minnesota renters, who comprised 25.4% of Minnesota households in the 2000 Census³ and who disproportionately include minorities, low income households, and young adults, have no guarantee of a smoke-free place to live and sometimes experience unwanted exposure to environmental tobacco smoke (ETS) entering their apartments from other apartments, from common areas of the building, or from outside the building. The goal of this project is to build a sound base of knowledge that will facilitate two types of actions to reduce renters' exposure to environmental tobacco smoke (ETS) in their homes:

- designation of smoke-free apartment buildings, and
- treatment of smoking-permitted buildings to minimize transfer of ETS among units.

The project includes six interrelated applied research activities:

1. ***Qualitative interviews of multifamily building owners and managers.*** These interviews will provide an understanding of the barriers and information needs owners face in addressing this issue.
2. ***A survey of a stratified random sample of Minnesota renters.*** This survey will quantify the extent and severity of perceived problems with ETS transfer among renters, both overall and within population groups of key concern to MPAAT (low income households, young adults, and minorities⁴). It will provide solid information on the marketability of smoke-free rental housing and the importance of ETS-free units to renters, both overall and by market segment. It will also provide data on the distribution of problems with ETS transfer by building type and location within buildings.
3. ***Legal research.*** Technical legal research will summarize the status of the law with regard to designation of smoke-free buildings and taking or failing to take actions to minimize ETS transfer in smoking-permitted buildings. It will examine federal and state legislation, regulations, case law, and secondary sources in the areas of landlord-tenant law, civil rights law, negligence/tort law, and nuisance and environmental rights law. The research will allow us to develop a model smoke-free lease clause, and to identify changes to statutes, ordinances and regulations that would facilitate smoke-free rental housing and reductions in ETS transfer in smoking-permitted housing.
4. ***Buildings research.*** This research will quantify contaminant dispersal and air movement among units in a sample of multifamily buildings in Minnesota, using passive perfluorocarbon tracer gas techniques, multiple fan depressurization and air flow modeling, supplemented by measurements of fine particulate mass and nicotine. The work will focus on those building types found in task 2 to have the greatest problems. After testing to diagnose the causes of unwanted air transfer, we will treat the building structure and the ventilation system(s) to reduce it and measure the reductions achieved. Successful treatments will be identified and associated costs quantified.

³ Based on information from the Minnesota State Demographer's internet site at <http://front.mnplan.state.mn.us/demography/Cen2000profiles/cen00profhouse.html>

⁴ Particular minorities of concern to MPAAT are Black, African-American, or African; Hispanic or Chicano; American Indian or Native-American; and Southeast Asian (Cambodian, Hmong, Vietnamese, Laotian, or Thai).

5. **Financial analysis.** Financial analysis will quantify the potential benefits of smoke-free properties to owners in terms of reduced turnover rates, reduced fire insurance rates and reduced costs of cleaning and maintenance when units turn over.
6. **Synthesis.** We will evaluate all of the research outcomes from Tasks 1 to 5 to identify the most promising avenues for application of the findings. The most appropriate paths of communication will be identified and the key project results will be packaged in formats suitable for the target audiences, in preparation for subsequent implementation.

This report summarizes the results of the first research activity: the qualitative interviews of multifamily building owners and managers. The success of voluntary efforts to increase the number of smoke-free rental properties is ultimately dependent on property owners' willingness to offer them. Similarly, the success of voluntary efforts to reduce ETS transfer in smoking-permitted buildings will often depend on property owners' willingness to invest in the necessary building modifications. It is therefore essential that the other research activities conducted as part of this project address owners' concerns and meet their information needs. The purpose of this task is to develop a thorough understanding of these concerns and needs.

No formal research has been done on this subject previously, to our knowledge. From ANSR's previous efforts to promote the concept, we know that some owners are particularly concerned about the legal ramifications of smoke-free buildings, the relative marketability of smoke-free buildings, and the cost and efficacy of building treatments to reduce ETS transfer between apartment units. The owner interviews enable us to obtain a more systematic and detailed picture of owners' concerns and of the types of information that could assuage these concerns sufficiently to enable them to take action.

The research questions addressed in this task are as follows:

Smoke-free buildings

- What are owners' overall reactions to and level of interest in the concept of smoke-free buildings?
- If they have offered smoke-free buildings (or units), why have they done so?
- If they have not, why have they not?
- What are owners' perceptions of the marketability of smoke-free buildings?
- What are owners' perceptions of the importance of a smoke-free building to the market segment(s) they rent to, relative to other criteria tenants use in choosing an apartment to rent?
- What types of market data do owners feel they need to better understand the marketability of smoke-free buildings?
- What are owners' concerns about the impact of "smoke-free" designation on vacancy rates and turnover?
- What unique market concerns do public housing and housing and redevelopment authorities have regarding designation of smoke-free public housing?
- What are owners' primary legal concerns about the possibility of designating one or more of their buildings as smoke-free buildings?
- What are owners' concerns about the impact of smoke-free leases on management costs (e.g., enforcement of lease terms)?

- What types of information do owners feel they need to better understand the potential legal risks and costs involved in designating smoke-free buildings?
- What legal or regulatory changes, if any, do owners believe are needed in order for them to designate one or more of their buildings smoke-free?
- What unique legal concerns do public housing authorities/housing and redevelopment authorities have regarding designation of smoke-free public housing?
- What types of financial information (e.g., comparative vacancy rates, turnover rates, management costs, insurance rates, maintenance costs) do owners feel they need to better quantify the relative profitability of smoke-free buildings?
- Which barriers do owners perceive to be lower: those for designating a subset of smoke-free units in a building or those for designating a totally smoke-free building?

Minimizing ETS transfer

- What are owners' perceptions of the extent and significance of problems with objectionable air movement between units in apartment buildings they own? Does it vary by type of building, by type of tenant or by other factors?
- What are owners' perceptions of the source(s) of objectionable air movement into apartments in their buildings? (e.g., direct leakage between units within the building, leakage from hallways into units, air transfer via the mechanical ventilation system, air movement from patios or balconies into other units, etc.)
- What are owners' perceptions of the extent and significance of problems with movement of ETS, specifically, between units in apartment buildings they own? Does it vary by type of building, by type of tenant, by rental rate, or by other factors?
- What are owners' perceptions of the source(s) of ETS, specifically, entering apartments in their buildings?
- What are owners' perceptions of the importance of ETS transfer relative to other factors tenants consider in deciding whether to move?
- What is owners' level of interest in information on how to reduce transfer of ETS and other objectionable air movement between units in their buildings?
- What are their primary concerns about taking action to reduce transfer of ETS or other contaminants between units in their buildings?
- What cost per dwelling unit would they consider to be reasonable to reduce such air transfer?

METHODOLOGY

Since the goal of this task is to identify and elucidate a broad spectrum of perceived barriers and information needs, a qualitative approach was used. Samples were selected to assure a diversity of types of owners and therefore of opinions, rather than to assure a statistically representative sample. Data collection focused on in-depth and partially open-ended discussion with a small number of owners, rather than shorter, closed-ended interviews of a large number of owners. This approach allowed us to explore the subject fully with respondents and to identify a comprehensive set of issues, rather than gain a more limited understanding based on a set of issues pre-defined by the research team.

Sample design, questionnaire design, analysis planning and report preparation were executed primarily by CEE and ANSR, but with significant input from the contracted survey research firm, Anderson, Niebuhr & Associates (ANA). Data collection, cleaning, coding and most of the analysis were executed by Anderson, Niebuhr & Associates, with input as needed from CEE. Staff of the Minnesota Multi Housing Association (MHA) and Hanbery, Neumeyer & Carney reviewed the survey instrument, and these organizations together with the Minnesota chapter of the National Association of Housing and Redevelopment Officials (Mn NAHRO) reviewed the draft report. MHA also signed a pre-letter that was sent to the private owners encouraging their participation.

Population

The population of interest for this task is comprised of those individuals who make the key decisions about management of rental properties. In some cases, these individuals are the owners themselves. In other cases, they are employees of property management companies who have broad decision-making authority in operating the properties. For convenience in this report, all of these individuals are referred to simply as “owners.”

There are two distinct types of owners of multifamily properties, private owners and public owners. The private owners of course are private companies, although they may sometimes manage government-assisted properties, particularly HUD Section 8 project-based housing. The public owners include housing and redevelopment authorities, community development agencies, public housing authorities and other city, county or regional agencies that operate low-income housing and sometimes other types of housing as well.

Samples

Private Owners Not Known in Advance to Have Smoke-Free Properties (“Private, General”)

For convenience, the general sample of private owners was selected primarily from the membership database of MHA. MHA members operate approximately 40% of the rental units in Minnesota. To assure a diversity of owners, we created a sampling grid that included large (≥ 250 units), intermediate (21-249 units) and small (≤ 20 units) owners (Table 1). MHA’s primary

membership categories are based on the number of units owned, managed or invested in by the member, so candidates were drawn largely from these categories to achieve the desired distribution of respondents. These categories are:

Independent (NI)	20 units or fewer
General (GEN)	21 to 99 units
Maxi (MAXI)	100-249 units
Multi Housing Action Council (MAC)	250 units or more

Recognizing that small owners are less likely to be MHA members than intermediate and large owners, we wanted to reach some small owners who were not members of MHA. We accomplished this through MHA's contacts with coalitions (COAL) of smaller owners, most of whose members are not members of MHA. These coalitions typically include owners within a limited geographic area, such as a suburb or a neighborhood of Minneapolis or St. Paul.

The sampling grid, which included ten interviews from each of the three size categories, intentionally over-sampled large owners. The rationale for this is that large owners' experience represents and their opinions affect a relatively larger proportion of the rental market. For example, MHA's metro area database includes 117 "MAC" members, who each manage at least 250 units. These individuals represent a bare minimum of $117 * 250 = 29,250$ units, many more than the 395 "NI" members, who each manage no more than 20 units (at most $395 * 20 = 7,900$ units). The 66 "MAXI" and 185 "GEN" members manage 21 to 249 units each.

Of the 482,000 occupied rental housing units in Minnesota in the 2000 Census, 304,000, or almost two-thirds, are located in the Minneapolis-St. Paul Standard Metropolitan Statistical Area.⁵ To assure that we included some non-metro owners in our interviews, we specified that at least 6 to 8 of the private owners interviewed should be from MHA's "CHAP" or "CHAPT" membership categories, which identify owners outside the Minneapolis-St. Paul metropolitan area. MHA's membership database does not include any information on the number of units owned by CHAP and CHAPT members.

MHA's Director of Services identified opinion leaders and other suggested contacts in each membership category. These owners formed the pool from which ANA drew its sample.

The net number of owners interviewed within each of the cells of the grid did not match the number initially specified for several reasons. First, some of the owners interviewed in the "private, general" sample later turned out to be on a list of known smoke-free (private, KSFB) owners provided by ANSR or to be public owners, and these completions were moved to those sample groups. Second, the MHA membership categories did not turn out to be a completely accurate indicator of the actual number of units owned. Third, the number of units owned or managed by COAL, CHAP and CHAPT owners was not known up-front. As a result, the net number of completions of private owners is only 26, compared with an initial target of 30, and the distribution is not exactly as originally specified. Of the net completions shown in Table 1,

⁵ *Profiles of General Demographic Characteristics 2000, 2000 Census of Population and Housing Minnesota.* U.S. Department of Commerce, 2000.

three of the large owners are located outstate and one of the smaller owners is located outstate, giving an outstate representation smaller than the 6 to 8 originally specified.

Table 1. Sampling Grid and Completions for General Sample of Private Owners (“Private, General”).

Subgroup	Anticipated source (MHA membership category)	Opinion Leaders	Others	Total*
Large (≥ 250 units)	MAC, CHAP, CHAPT	specified: 2-3 completed: 4 overlap w KSFB: 0 overlap w Public: 0 net: 4	specified: 7-8 completed: 8 overlap w KSFB: 1 overlap w Public: 1 net: 6	specified: 10 completed: 12 overlap w KSFB: 1 overlap w Public: 1 net: 10
Intermediate (21-249 units)	MAXI, GEN, CHAP, CHAPT	specified: 2-3 completed: 1 overlap w KSFB: 1 net: 0	specified: 7-8 completed: 9 overlap w KSFB: 2 net: 7	specified: 10 completed: 10 overlap w KSFB: 3 net: 7
Small (≤ 20 units)	NI, CHAP, CHAPT, COAL	specified: 2-4 completed: 1 overlap w KSFB: 0 net: 1	specified: 6-8 completed: 9 overlap w KSFB: 1 net: 8	specified: 10 completed: 10 overlap w KSFB: 1 net: 9
Total		specified: 6-10 completed: 6 overlap w KSFB: 1 overlap w Public: 0 net: 5	specified 20-24 completed: 26 overlap w KSFB: 4 overlap w Public: 1 net: 21	specified: 30 completed: 32 overlap w KSFB: 5 overlap w Public: 1 net: 26

*to include at least some outstate (CHAP, CHAPT) members – at least 6 or 8 outstate in entire sample

Private Owners Known in Advance to Have Smoke-Free Buildings (“Private, KSFB”)

For this project, we have a particular interest in owners who have already designated some smoke-free buildings or apartments. Their actual experiences are more valuable than any amount of speculation about the effect of smoke-free designation on turnover, vacancy, legal risk, staff time requirements, and so on. Furthermore, any positive experiences they have had would almost certainly be more persuasive than any other type of information in encouraging other owners to offer smoke-free housing.

We were uncertain how many owners of smoke-free buildings we would be able to identify, and set an initial target of 3 to 5 completions. In the course of our work, ANSR provided a list of smoke-free properties compiled by the Health Division of the City of Bloomington, including some properties in Bloomington, Richfield, Minneapolis, Edina, and Buffalo. Excluding one assisted living/nursing home, one condominium building, one building owner for whom we could not find a valid current phone number, and one duplicate, this list included 13 owners of smoke-free rental buildings. In addition, ANSR was aware of another property in St. Paul, for a total of 14 known owners of smoke-free buildings. Input from these owners was considered to be so important that the scope and budget for this task were expanded to allow the survey

research firm to interview as many as possible. Eleven interviews were completed from this group, covering a range of sizes (see Table 2).

Table 2. Sampling Grid and Completions for Private Owners Known in Advance to Have Smoke-Free Buildings (“Private, KSFB”).

Size Category	Anticipated Source	Total
Large (≥ 250 units)	ANSR, MHA	specified: (no number specified) completed: 2
Intermediate (21-249 units)	ANSR, MHA	specified: (no number specified) completed: 7
Small (≤ 20 units)	ANSR, MHA	specified: (no number specified) completed: 2
Total		specified (initial): 3 to 5 specified (revised): up to 14 completed: 11

Note that seven of the 26 owners in the “Private, general” sample (Table 1) and two of the 12 owners in the “Public” sample also turned out to have smoke-free properties. Thus the total number of owners of smoke-free properties interviewed was twenty.

Public Owners (“Public”)

Public owners manage only about 10% of the rental units in the state, so the public owner sample was designed to be smaller than the sample of private owners.⁶ Public owners were selected from the directory of the Minnesota chapter of the National Association of Housing and Redevelopment Officials’ (Mn NAHRO). To assure a diversity of public owners, we created a sampling grid that included six subgroups (Table 3). CEE assigned NAHRO’s membership to the six subgroups based on data in the directory. Within each subgroup, we identified a list of first-choice and replacement agencies to be interviewed. The sampling grid was designed to over-sample large owners, both through the definition of subgroups and through the agencies selected to be interviewed within each subgroup.

⁶ The 2000 Census shows 482,262 renter-occupied housing units in Minnesota. According to Minnesota NAHRO staff, there are 21,684 units of HUD low rent public housing in Minnesota. According to staff of the Minnesota Housing Finance Agency, there are at least 42,270 units of “project-based” publicly -assisted housing in Minnesota (mostly HUD Section 8 but also including some Farmers Home Administration 515 and similar housing), but much project-based housing is privately owned.

Table 3. Sampling Grid and Completions for Public Owners (“Public”).

Subgroup	Anticipated Source	Total
Minneapolis, St. Paul	NAHRO	specified: 2 completed: 1
First Ring Suburbs	NAHRO	specified: 1 completed: 1
Greater Minneapolis -St. Paul Metropolitan Area	NAHRO	specified: 3 completed: 3
Major Cities outside Mpls/St. Paul Metro Area (Duluth, Rochester)	NAHRO	specified: 1 completed: 1
Active Agencies Outside Mpls/St. Paul Metro Area	NAHRO	specified: 4 completed: 5
Small Agencies Outside Mpls/St. Paul Metro Area	NAHRO	specified: 1 completed: 1
Total		specified: 12 completed: 12

ANA was able to interview the first choice agency for 10 of the 12 completions. In the Metro Cities subgroup, which included only two agencies, one agency refused to respond. In one other case, the first choice agency could not be interviewed and the second choice agency was interviewed. One interviewee was moved from the private to the public owner group, resulting in one more completion than planned in the Active Outstate subgroup.

Design of the Survey Instrument

CEE and ANSR developed a first draft of the owner questionnaire, which was critiqued by staff of ANA, MHA and Hanbery, Neumeyer & Carney and went through several iterations. ANA pre-tested the questionnaire with 5 private owners and revised it further with CEE and ANSR. Mn NAHRO was not able to give us input on the questionnaire within the timeframe available. Prior to the interviews with public owners, the questionnaire was adapted in minor ways by CEE to fit the public owner sample better. Copies of the final private questionnaire (used with the Private, General and Private, KSFB groups) and the public questionnaire (used with the Public group) are included in Appendix A.

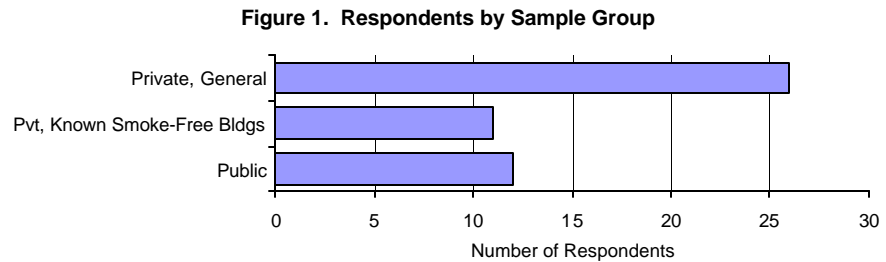
Data Collection

In-depth qualitative interviews generally require either telephone or face-to-face data collection. For this study, interviews were conducted by telephone, since this approach is generally easier for business professionals, yields a higher response rate and allows access to a more dispersed sample.

Each owner was sent a pre-letter (see Appendix A), notifying him or her of the purpose of the study and encouraging participation. The private owners received a pre-letter on MHA letterhead signed by MHA’s president. Mn NAHRO declined to send a letter to their members, so public owners received a pre-letter on CEE letterhead. The letters stated that the research

project had to do with indoor air quality in multifamily buildings, but did not mention tobacco smoke. The letters explained that an honorarium of \$100 would be provided to each respondent who completed an interview, in recognition of the value of their time. The honorarium also served to communicate the importance of the study. Owners were then contacted by telephone to schedule interviews at times that would be convenient to them.

The survey was conducted using Anderson, Niebuhr & Associates' established telephone survey methods. Interviews were conducted by ANA's most experienced in-house interviewers, who have considerable experience in interviewing executive-level businesspeople. ANSR staff listened to several interviews to assure the collaborators of the quality of the process and the data. Data collection occurred from January 9 through April 27, 2001. In total, 49 surveys were completed, 26 from the Private, general sample, 11 from the Private, KSFb sample, and 12 from the Public sample (Figure 1).



Mn NAHRO's board adopted several position statements regarding the project and released them to its members prior to our interviews with that group. The statements in themselves provide valuable information about the concerns that public owners on NAHRO's board have, both about smoke-free buildings and about efforts to reduce ETS transfer in smoking-permitted buildings. However, they also had the potential to affect the opinions of our public owner interviewees. For this reason, we added two questions to the public owner survey to measure the impact of the position statements on our data. Three of the 12 private owners interviewed said that they were aware of Mn NAHRO's position statements⁷ (Question 64). Of these, one said that these positions had influenced his/her opinions on this subject a great deal, one said some, and one said not at all (Q65). Based on these answers, we feel that the Mn NAHRO board's position statements did not greatly influence the responses we received in interviewing their members.

Minnesota NAHRO's position statements are listed below:

- We do not support mandates of any kinds, particularly unfunded mandates. We already manage several funded and unfunded mandates that impact our ability to efficiently and effectively administer our affordable housing programs.
- We are concerned about limiting access to scarce affordable housing.
- We are concerned about discrimination, fair housing and other legal issues, including by-passing people on the waiting list based on their smoking status.
- We are concerned about the conflicts with federal and state regulations regarding the ownership and operation of federally assisted housing (there are many regulations, often with associated penalties for less than high performance in areas such as turnaround time and occupancy rates).

⁷ A fourth did not answer these questions because s/he was interviewed earlier as part of the MHA group, before the Mn NAHRO position statements were released.

- We are concerned about the administrative burden of keeping track of who smokes and who doesn't, and about policing (what about renters who violate the policy; who start/stop smoking - sometimes repeatedly; guests who smoke; etc.).
- We support the research and development of better technology in this area, but have concerns about funding for such technology. Our current funding is mostly federal and already inadequate to meet basic operating and modernization needs.
- We support the provision of funding as an incentive to owners to purchase and install treatment equipment and other technology.

Data Cleaning and Analysis

Each questionnaire was reviewed for completeness and consistency before being transferred to magnetic media for computer analysis. All transfer of data was verified. CEE provided input to ANA regarding data cleaning and back-coding of various "other" responses into pre-defined response categories.

CEE provided a detailed analysis plan to ANA. The Statistical Package for the Social Sciences (SPSS/Windows) and WinCross were used to calculate descriptive statistics and run cross-tabulations and to prepare tab and banner reports.

The tab and banner report (Appendix B) presents data for the following comparison groups:

- Smoke free owners (Yes or No--based on Q22⁸)
- Sample group (Private, general; Private, KSFB; Public), as described under "Samples" above)
- Type of owner (Private, Public)
- Type of owner and smoke-free (Private smoke-free, Private not smoke-free, Public smoke-free, Public not smoke-free)
- Viable market for smoke free properties (Yes, No, Don't know—based on Q37)
- Size (Small, Intermediate, or Large--based on Q4)
- Location (Metro or Outstate)

⁸ All owners who said yes to Q24 also said yes, or yes – phasing it in to Q22.

RESULTS

Several points must be kept in mind in reviewing the results of the interviews:

1. First, the sample was not selected at random, but rather had a pre-defined number of general private owners (Private, General), private owners known in advance to have smoke-free buildings (Private, KSFB), and public owners (Public). Therefore, the results for the total sample cannot be viewed as representative of the opinions of Minnesota multifamily owners as a whole.
2. Responses can be compared across subgroups, for example, owners who do and do not have smoke-free buildings. All of the samples are small, though, so in many cases the results are not statistically significant but only suggestive.
3. The Private, General sample and the Public sample were designed to over-sample large owners. While this makes the responses representative of a larger number of dwelling units, it makes them less representative of the opinions of smaller owners.

The comparison groups shown in the tab and banner report (Appendix B) are explained fully in the Methodology section above.

The Owners/Managers and Their Buildings

The interviewers asked to speak to the individual who makes the key decisions about the management of rental properties for the company or agency called. The individuals we interviewed were generally closely involved in their properties, as well as being the key decision-makers:

- Eighty percent said that they are the leasing agents for their properties (Q1). Leasing agents typically show apartments to prospective tenants and screen and select tenants. They should, therefore, be quite familiar with their companies' rental policies, what prospective renters value, and the effect of various factors on a property's marketability, vacancy rate, and turnover rate, and on the amount of staff time required to manage it.
- Sixty-nine percent of interviewees said that they visit each of their properties, on average, more than twelve times per year, and 18 percent said they visit each property four to twelve times a year (Q2). Only 10% said that they visit each property, on average, only one to three times per year. The group as a whole, therefore, should be quite familiar with the operation of their buildings and with the types of issues and complaints that arise.

The respondents manage a total of 899 multifamily buildings in Minnesota (Q3)(Table 4) and 27,116 rental units in those buildings (Q4). According to data recently released from the 2000 Census, there are 482,262 renter-occupied housing units in Minnesota, so the respondents manage about 6% of the total rental units in the state. Since about 17% of the total rental households are in single-family detached dwellings (according to the 1990 Census, the latest data available), these respondents actually manage about 7% of the total multifamily rental units in the state. The private owners we interviewed manage about 17,000 units and the public owners about 10,000. On a statewide basis, public owners only operate about 10% of the rental units, so our overall sample over-represents publicly-operated housing.

The respondents cover a range of sizes, with those managing large numbers of units heavily represented, as intended in the sample design (Figure 2).

Forty-three percent of the owners interviewed manage 250 residential units or more in Minnesota, 35% manage 21 to 249 units and 22% manage 20 units or fewer (Q4).

Figure 2. Respondents by Number of Units Managed

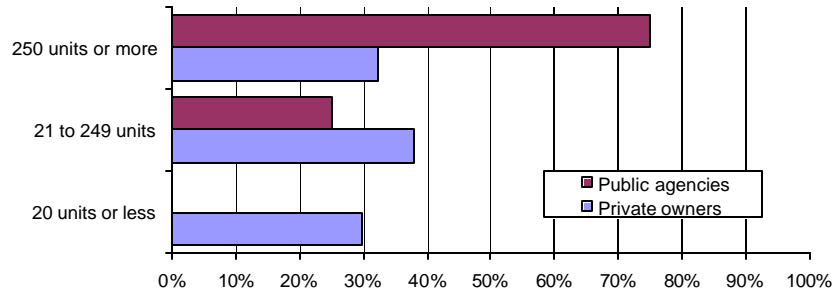


Table 4. Buildings and Units Managed by Respondents, Overall and by Size of Building

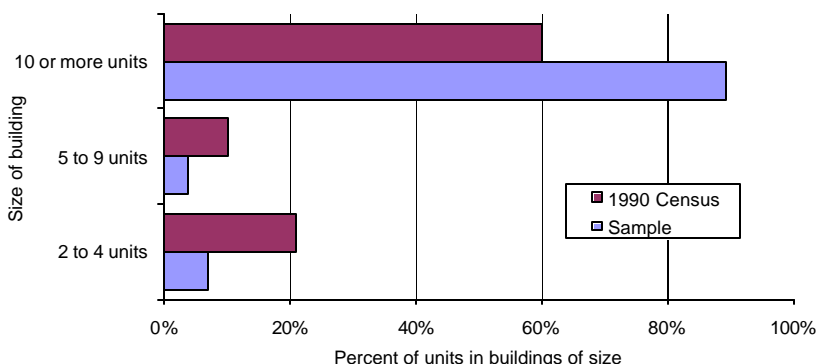
	Number			Percent		
	Total	Private, general plus Private, KSFB	Public	Total	Private, general plus Private, KSFB	Public
Buildings Managed	899	568	331			
Units Managed	27116	16962	10154			
Buildings by Size of Building						
2 to 4 units	316	104	212	36%	20%	58%
5 to 9 units	93	60	33	11%	12%	9%
10 or more units, 3 stories or less	371	283	88	42%	55%	24%
10 or more units, 4 to 6 stories	64	60	4	7%	12%	1%
10 or more units, 7 or more stories	33	6	27	4%	1%	7%
Total*	877	513	364	100%	100%	100%
Units by Size of Building						
2 to 4 units	1718	687	1031	7%	4%	12%
5 to 9 units	901	672	229	4%	4%	3%
10 or more units, 3 stories or less	12269	9186	3083	49%	57%	35%
10 or more units, 4 to 6 stories	5364	5019	345	22%	31%	4%
10 or more units, 7 or more stories	4544	495	4049	18%	3%	46%
Total*	24796	16059	8737	100%	100%	100%

*The sums of buildings or units by size do not equal the overall totals partly because one large public agency was unable to provide a breakdown by size, and partly because individual managers' breakdown numbers did not always add exactly to their total numbers.

About 7% of the units the respondents manage are in 2-to-4 unit buildings, about 4% are in 5-to-9 unit buildings and about 89% are in buildings of 10 units or more (Table 4, Figure 3). This distribution under-represents smaller buildings, which are disproportionately owned by smaller

operators who were intentionally under-sampled in this survey. In the 1990 Census, the latest

Figure 3. Percent of Rental Units by Building Size, Units Managed by Respondents vs. 1990 Census



data available, 2-to-4 unit dwellings accounted for 21% of the multifamily rental units, 5-to-9 unit dwellings accounted for 10%, and buildings of ten or more units accounted for 60%, with the rest in mobile homes, trailers, single family attached housing and other dwelling types.

Among the buildings of 10 units or more in our sample, buildings of three stories or less account for over half of the units. To help us in planning our field testing (Task 4), we asked for further information about these buildings (Q6), which we had expected to account for the largest number of units. As reported by the respondents, the most common type of building in this size range was of wood framed construction with central heating and central ventilation (35%), followed by wood framed with individual furnaces (21%) and wood framed with central heating but without central ventilation (17%)(Table 5).

Table 5. Characteristics of the Buildings with 10 Units or More and Three Stories or Less.

	Total	All Private ("Private" plus "KSFB")	All Public ("Public")	Total	All Private ("Private" plus "KSFB")	All Public ("Public")
masonry	25	20	5	5%	5%	6%
wood framed with individual furnaces	95	64	31	21%	17%	34%
wood framed with central heating and central ventilation	160	106	54	35%	29%	60%
wood framed with central heating but without central ventilation	79	79	0	17%	21%	0%
other	100	100	0	22%	27%	0%
Total	459	369	90	100%	100%	100%

Fifty-nine percent of the units managed by the respondents are unsubsidized housing (Table 6, Figure 4).⁹ Twenty-eight percent are in HUD Low Rent Public Housing, 9% are in HUD Section 8 project-based housing and 4% are in other publicly-assisted housing. The private managers

⁹ These buildings may still house some renters who use Section 8 Housing Choice vouchers to pay part of the rent.

have 87% of their units in unsubsidized housing and 12% in HUD Section 8 project-based housing. The public owners have 63% of their units in HUD Low Rent Public Housing, 5% in HUD Section 8 project-based housing and 9% in other publicly assisted housing, but they also have 23% of their units in unsubsidized housing.

Figure 4. Subsidy Status of Units Managed by Respondents

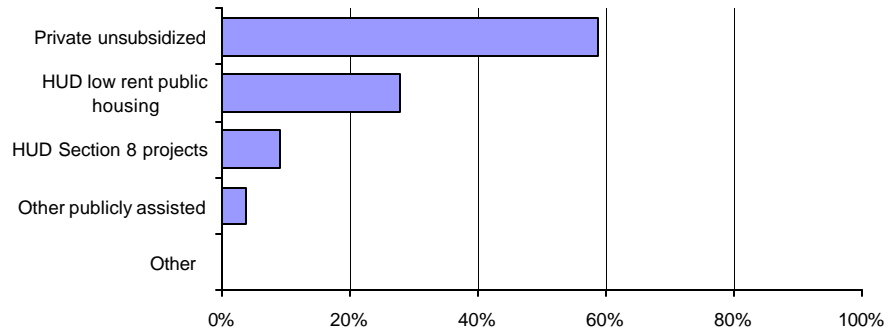


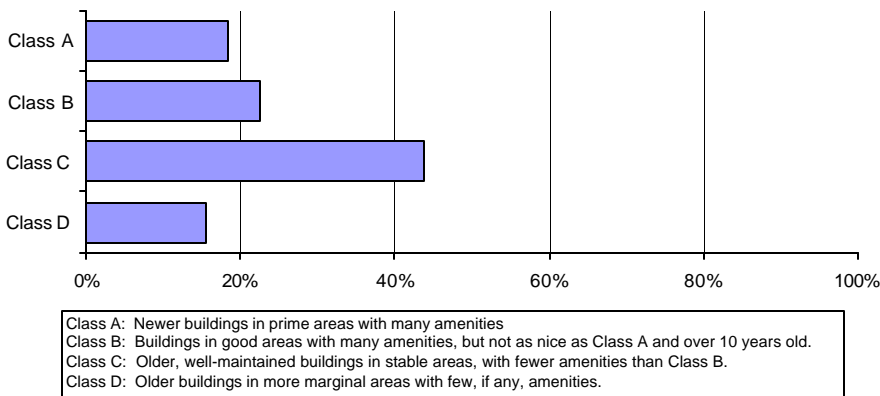
Table 6. Subsidy Status of Units Managed by Respondents.

	Total	All Private ("Private" plus "KSFB")	All Public ("Public")	Total	All Private ("Private" plus "KSFB")	All Public ("Public")
Unsubsidized	13819	11389	2430	59%	87%	23%
HUD Low Rent Public Housing*	6585	1	6584	28%	0%	63%
HUD Section 8 Projects	2121	1632	489	9%	12%	5%
Other publicly assisted	922	0	922	4%	0%	9%
Other	48	48	0	0%	0%	0%
Total	23495	13070	10425	100%	100%	100%

*According to the Minneapolis HUD office, there is some privately managed HUD "Low Rent Public Housing" in Minnesota, including Metropolitan Housing Opportunity Program property that is formally considered LRP, so the unit indicated by a private owner could be accurate.

Of the unsubsidized buildings, 18% were identified by the respondents as Class A buildings, that is, newer buildings in prime areas with many amenities (Table 7, Figure 5). Twenty-three

Figure 5. Class of Unsubsidized Buildings Managed by Respondents



percent were identified as Class B buildings, that is, buildings in good areas with many amenities, but not as nice as Class A buildings and over 10 years old. Forty-four percent were identified as Class C buildings, that is, older, well-maintained buildings in stable areas, with fewer amenities than Class B

buildings. Fifteen percent were identified as Class D buildings, that is, older buildings in more marginal areas with few, if any, amenities.

Table 7. Class of Unsubsidized Buildings Managed by Respondents

	Total	Private, general plus Private, KSFB	Public	Total	Private, general plus Private, KSFB	Public
Class A	94	73	21	18%	16%	32%
Class B	116	84	32	23%	19%	48%
Class C	225	212	13	44%	47%	20%
Class D	79	79	0	15%	18%	0%
Total	514	448	66			

Movement of Secondhand Smoke in Smoking-Permitted Buildings

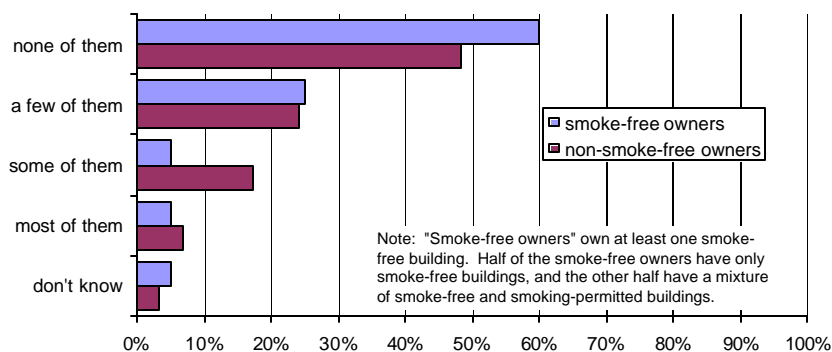
Prevalence and Types of Objectionable Air Movement in Apartment Buildings

We asked owners how many of their buildings experience movement of objectionable air into tenants' apartments on a regular or recurring basis (Q9). Objectionable air was defined for them as air that contains odors or contaminants that residents may object to, and they were asked to consider only

objectionable air that moves into individual apartments from elsewhere on the premises, that is, from other apartments, from common areas, or from the grounds. Fifty-three percent of owners said that none of their buildings experience movement of objectionable air on a

regular or recurring basis. Twenty-five percent said that a few of their buildings do, 12% said some of their buildings do, and 6% said most of their buildings do (Figure 6).

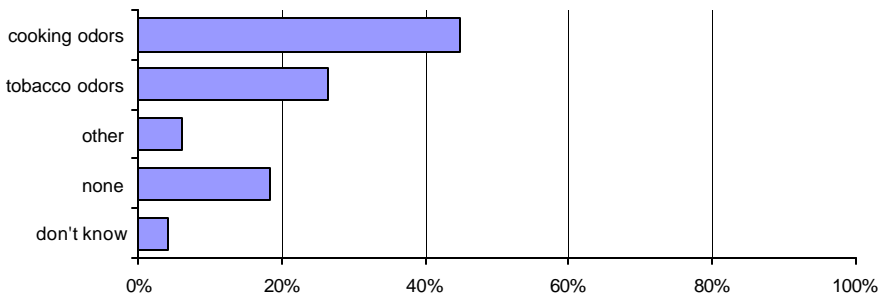
Figure 6. How many of your buildings experience movement of objectionable air into tenants' apartments on a regular or recurring basis?



Forty-five percent of the owners interviewed identified cooking odors as the most common source of objectionable air, and 27% identified tobacco smoke (Q10) (Figure 7). When asked what other types of odors or contaminants are significant sources of objectionable air in buildings they manage, 14% mentioned cooking odors and 14% mentioned tobacco smoke odors (Q11) (Figure 8). The only other odors mentioned by more than one owner were paint/polyurethane/carpet glue, outdoor car exhaust, pet odors and garbage. Other odors

mentioned by one owner each include urine; chemicals; gas or exhaust from the underground

Figure 7. What type of odor or contaminant is the most common source of objectionable air in buildings you manage?

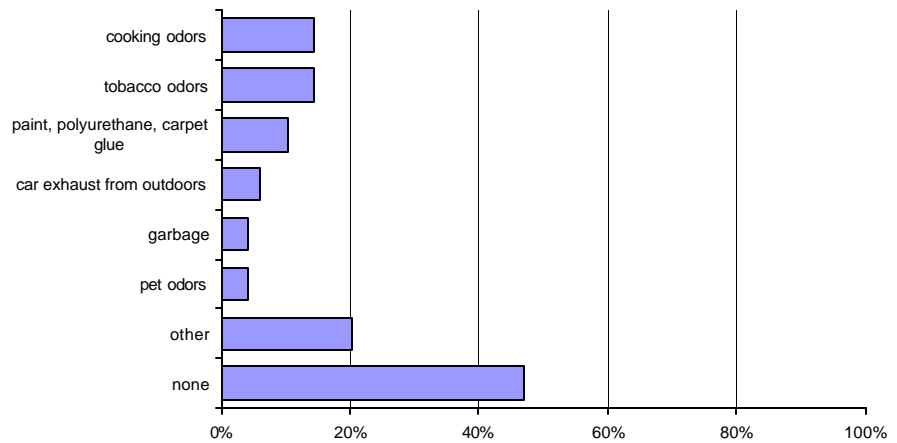


parking garage; mold; tar when roads are being resurfaced; marijuana smoke; manure; and odors from stockyards, a meat processing plant and a sewage treatment plant (see verbatim responses in Appendix C). Cooking odors and tobacco smoke are by

far the most often mentioned, both as the most common source and as other significant sources of objectionable air.

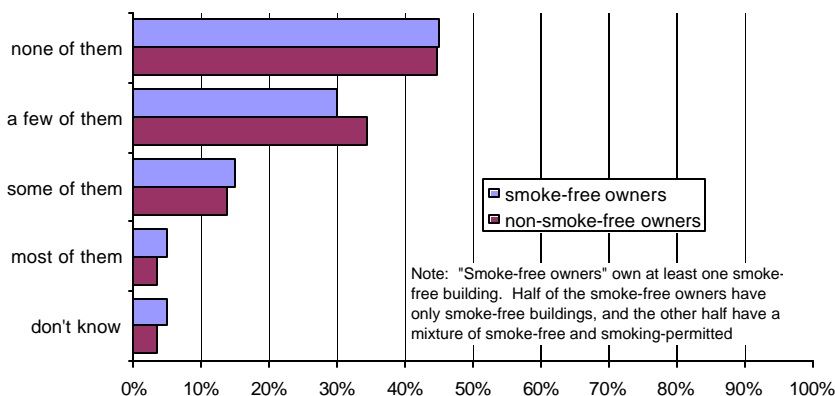
These questions were the first ones asked after general questions about the respondent and their buildings, and since the pre-letter did not mention tobacco smoke, its frequent mention cannot be attributed to awareness by respondents of the core subject of the interviews.

Figure 8. What other types of odors or contaminants are significant sources of objectionable air in buildings you manage?



Prevalence of Secondhand Smoke Movement in Apartment Buildings

Figure 9. How many of your buildings would you say experience movement of secondhand smoke into apartments [from elsewhere on the premises] on a regular or recurring basis?



When asked specifically how many of their buildings experience movement of secondhand smoke into apartments on a regular or recurring basis (Q14), 4% said most of them do, 14% said some of them do, 33% said a few of them do, and 45% said none of them do.

Routes of Entry of Secondhand Smoke, Characteristics of Buildings Most Likely to Experience Secondhand Smoke Transfer

When asked how secondhand smoke gets into a tenant's apartment from elsewhere on the premises (Q18), 48% of the owners interviewed said via the corridors/hallways, 37% said via the mechanical ventilation

system, 33% said via cracks in the walls, floor, etc., and 22% said via open windows, with 19% mentioning various other routes.

When asked which of these is the most common route, 41%

said via the

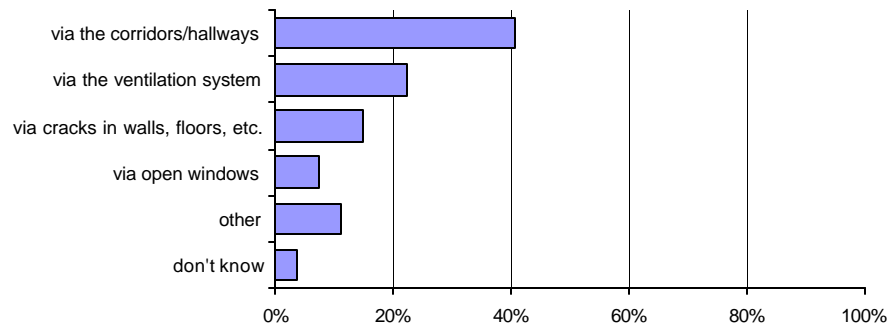
corridors/hallways,

22% said via the

mechanical ventilation

system, 15% said via cracks in walls, floors, etc., and 7% said via the open windows (Figure 10).

Figure 10. What is the most common route [by which secondhand smoke gets into a tenant's apartment from elsewhere on the premises]?



When we asked owners which types of buildings are most likely to experience regular or recurring movement of secondhand smoke into apartments (Q13), they gave a wide array of answers (see verbatim responses in Appendix C). It is evident from the tenor of their comments that many of the owners were speculating rather than stating definite opinions based on experience. The characteristics mentioned most often were large buildings, older buildings, multistory buildings, buildings with corridors, buildings with central or shared ventilation, highrises, buildings with poor ventilation, buildings with poor construction, wood framed buildings, and buildings with central heat (although this appears to have been confused in their minds with buildings with central ventilation).

Perceived Importance of Secondhand Smoke Movement

When we asked owners how important movement of secondhand smoke into apartments is, relative to other rental housing issues (Q12), the answers differed by whether the owners had designated any smoke-free buildings or not. Sixty-five percent of the smoke-free owners said this issue is very important relative to other rental housing issues and 22% said it is somewhat important. Among those who have not designated smoke-free buildings, 21% said it is very important and 21% said it is somewhat important (Figure 11). Similarly, smoke-free and non-smoke-free owners differed as to whether they considered movement of secondhand smoke into an apartment from elsewhere to be a health issue for tenants (Q20). Forty percent of smoke-free owners said yes, a major health issue, 55% said yes, a minor health issue, and only 5% said no. Among non-smoke-free owners, only 17% said yes, a major health issue, 48% said yes, a minor health issue, and 24% said no (Figure 12).

Figure 11. Relative to other rental housing issues, how important is the movement of secondhand smoke into tenants' apartments?

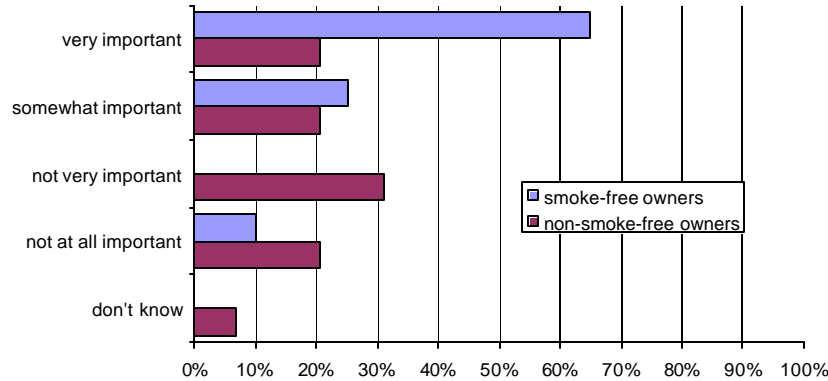
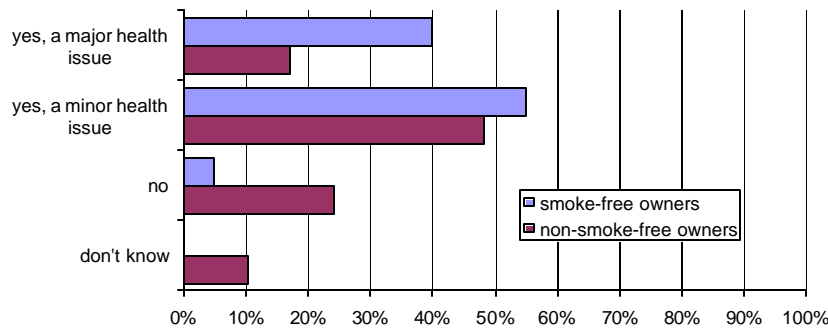


Figure 12. If secondhand smoke moves into an apartment from elsewhere on the premises, would you consider that a health issue for the tenants? Would you say...



Perceived Impact of Secondhand Smoke on Business Concerns

Of the owners who said that at least a few of their buildings experience movement of secondhand smoke into apartments on a regular or recurring basis, we asked several questions to assess the impact that this might have from a business perspective.

- Seven percent of these owners said that, in buildings where secondhand smoke transfer occurs on a regular or recurring basis, it is often a significant factor in potential tenants’ decision whether to rent, 15% said it sometimes is, 41% said it rarely is, and 33% said it never is (Q16) (Figure 14).
- Nineteen percent of these owners said that, in those buildings where secondhand smoke transfer occurs on a regular or recurring basis, it is sometimes a significant factor in existing tenants’ decision to move, 48% said it rarely is, 30% said it never is (none said it often is)(Q15) (Figure 13).
- Nineteen percent of these owners interviewed said that, in buildings where it occurs on a regular or recurring basis, secondhand smoke transfer sometimes requires significant staff

time to resolve tenants' complaints, 59% said it rarely does, and 15% said it never does (Q17) (Figure 15).

Figure 13. ...how often is [secondhand smoke movement into apartments] a significant factor in existing tenants' decision to move?

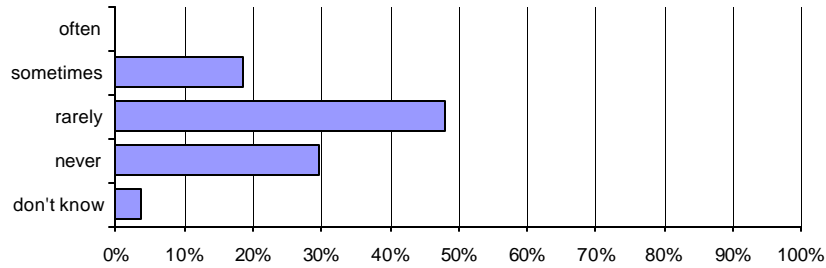


Figure 14. ...how often is secondhand smoke movement into apartments a significant factor in potential tenants' decision whether to rent?

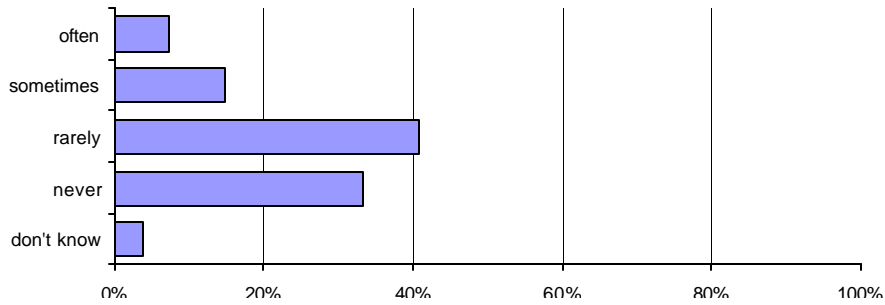
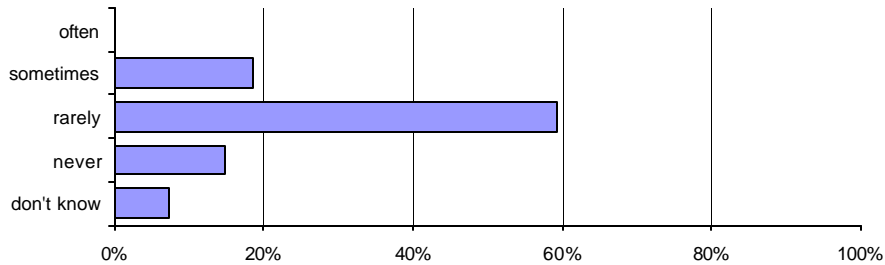


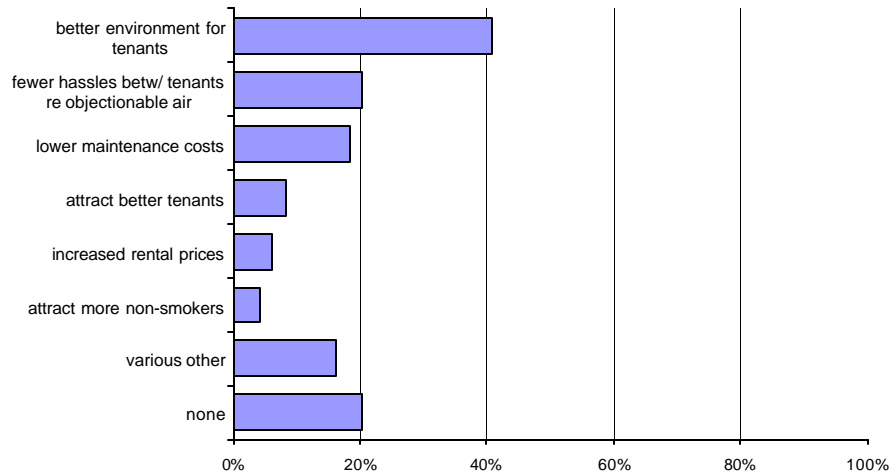
Figure 15. How often does secondhand smoke movement into apartments require significant staff time to resolve tenants' complaints?



Reducing Secondhand Smoke Movement through Building Modifications

When asked what benefits they would see in making modifications to their buildings to reduce movement of secondhand smoke or other objectionable air into apartments (Q55), 41% of the owners we interviewed mentioned a better environment for tenants, 20% mentioned fewer hassles between tenants over objectionable air, 18% mentioned lower maintenance costs, 12% mentioned attracting “better” tenants or attracting more non-smokers, and 6% mentioned increased rental prices (Figure 16). A few mentioned other benefits (see

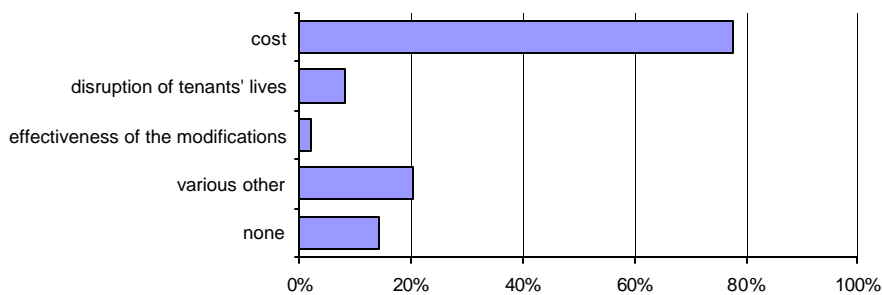
Figure 16. What benefits would you see in making modifications to your buildings to reduce movement of secondhand smoke or other objectionable air into apartments?



verbatim responses in Appendix C), and 20% said they saw no benefits. The majority of the owners who saw no benefits had said that none of their buildings had a problem with secondhand smoke transfer.

When asked what concerns they would have about making modifications to reduce ETS transfer (Q56), 78% of owners interviewed mentioned cost and 8% mentioned disruption of tenants’ lives (Figure 17). Other issues were raised by only a few owners (see verbatim responses in Appendix C).

Figure 17. What concerns would you have about making modifications to your buildings to reduce movement of secondhand smoke or other objectionable air into apartments?

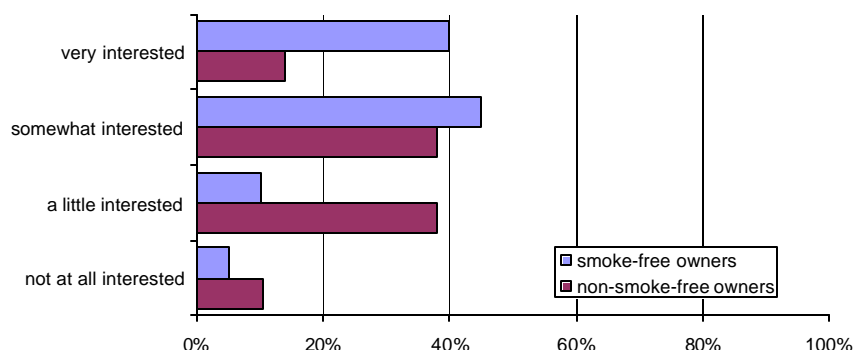


cost and 8% mentioned disruption of tenants’ lives (Figure 17). Other issues were raised by only a few owners (see verbatim responses in Appendix C).

Twenty-five percent of the owners interviewed were very interested in

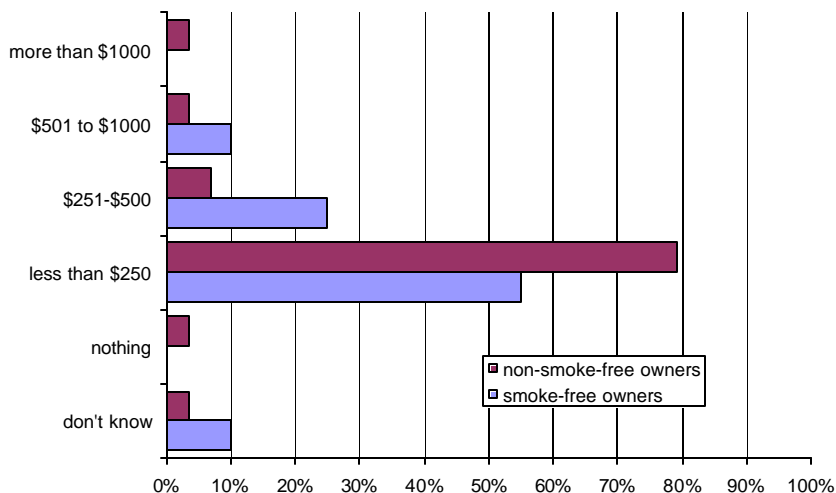
learning about ways to reduce movement of ETS and other objectionable air into apartments, 41% were somewhat interested, 27% were a little interested, and 8% were not at all interested. The smoke-free owners were significantly more likely to be very interested than non-smoke free owners (40% vs. 14%) (Figure 18).

Figure 18. How interested would you be in learning about ways to reduce movement of ETS and other objectionable air into apartments in existing multifamily buildings?



When we asked how much owners would be willing to spend per apartment to implement measures that would substantially reduce movement of secondhand smoke or other objectionable air into apartments (Q57), 69% said less than \$250 per apartment (Figure 19). Fourteen percent would be willing to spend \$251 to \$500, 6% would be willing to spend \$501 to \$1000, 2% would be willing to spend more than \$1000 per apartment, and 2% would not be willing to spend anything, while 6% said they did not know. In general, owners are willing to pay substantially less than the roughly \$1150 to \$1300 per unit that was budgeted for diagnostics and treatments in the buildings research portion of this project.

Figure 19. How much do you think you would be willing to spend per apartment [to implement measures to substantially reduce movement of secondhand smoke]?



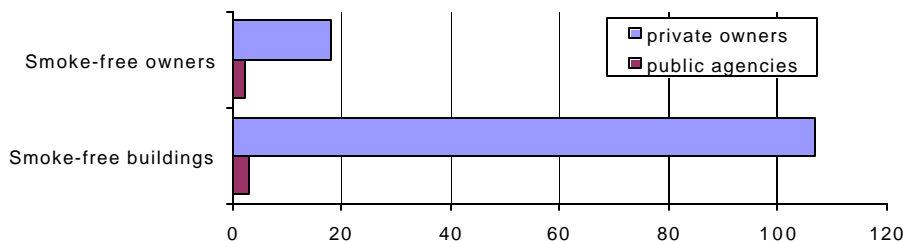
It would be less expensive to modify multifamily buildings to reduce secondhand smoke transfer at the time of construction than it is to modify existing buildings. Eleven of the 49 owners we interviewed said that their company or agency was involved in construction of new rental property. Of these, 27% said they would be very interested in learning about ways to reduce movement of secondhand smoke and other objectionable air in new buildings and 46% said they would be somewhat interested.

Direct Experience with Smoke-Free Buildings

Smoke-Free Owners/Buildings Identified

We were able to gather information on actual experience with smoke-free buildings from 20 owners (Figure 20), 14 who have fully implemented smoke-free policies, and six who are gradually phasing such a policy in (Q22). Eleven of the 20 smoke-free owners

Figure 20. Number of Smoke-Free Owners and Smoke-Free Buildings Identified



interviewed came from the list of known smoke-free owners provided by ANSR (Private, KSFB). Of these, seven said that they have designated completely smoke-free buildings and four said that they are gradually phasing the policy in. We identified six other private owners who have designated completely smoke-free buildings and one who is gradually phasing the policy in. One public owner has designated smoke-free buildings, and another is gradually phasing the policy in. The owners we interviewed who have designated or are phasing in smoke-free buildings included six small owners (≤ 20 units), eight intermediate owners (21 to 249 units) and six large owners (≥ 250 units).

Each of these owners had designated from 1 to 50 buildings smoke-free (Q23). The group as a whole had designated a total of 110 buildings smoke-free (Figure 20). One hundred seven of these have private owners (Private, general or Private, KSFB), while three have public owners (Public).

Twelve of the owners of smoke-free buildings had designated 75 to 100% of their buildings smoke-free, while six had designated 25% or fewer smoke free (23A). Public owners are significantly more likely to have designated only a small fraction of their buildings smoke-free than are private owners.

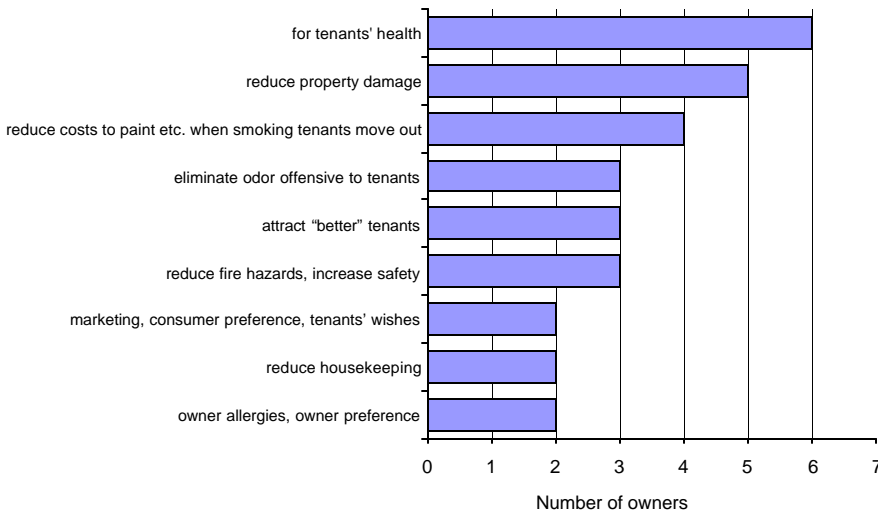
Reasons for Designating Smoke-Free Buildings

When these owners were asked why they had designated some buildings or units smoke free (Q25), they gave the following reasons (Figure 21):¹⁰

¹⁰ Full verbatims are listed in Appendix B. Some owners misunderstood the question and explained why they designated entire buildings rather than individual units smoke-free or vice versa. Their responses are not included here.

- for the health of the tenants
- to reduce property damage
- to reduce costs to paint, clean, etc. when smoking tenants move
- because smoke odor is offensive to tenants
- to attract “better” tenants
- to reduce fire hazards, or for the safety of tenants
- for marketing, because it is a consumer preference, to comply with tenants’ wishes
- to reduce housekeeping
- owner allergies, owner preference

Figure 21. Why did you designate some buildings or units as smoke-free?



Types of Buildings Designated Smoke-Free

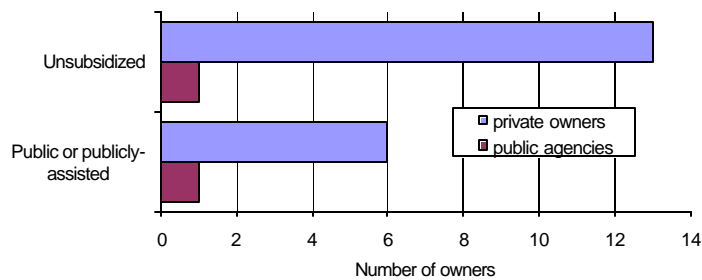
Fourteen owners said that they had designated unsubsidized buildings smoke-free, including 13 private owners (Private, general and Private, KSFB) and one public agency (Q26)(Figure 22).

Six private owners and one public agency said they had designated some kind of public or publicly-assisted housing smoke-free.

Although we asked specifically about HUD Low Rent Public Housing, HUD Section 8 project-based housing and “other”

publicly-assisted housing, we did not feel comfortable with

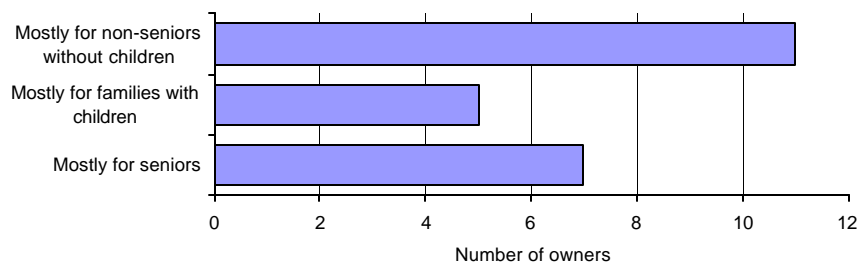
Figure 22. Have you designated any of the following types of buildings as entirely or partly smoke-free?



the accuracy of the private owners' responses on this more detailed information. It appears that private owners may not accurately distinguish between these types of housing. The public agency's statement that they have designated Section 8 project-based housing smoke-free is probably accurate, since these agencies are very familiar with the different federal and state housing programs.

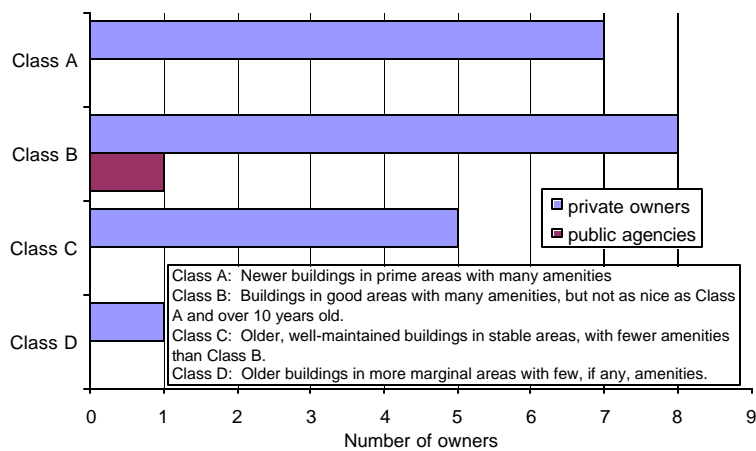
The owners interviewed have designated buildings smoke-free that are mostly for seniors, mostly for families with children, and mostly for non-seniors without children (Q28)(Figure 23).

Figure 23. Of all the buildings you have designated entirely or partly smoke-free, have any been...?



The unsubsidized buildings designated smoke-free include Class A, B, C and D buildings (Q27)(Figure 24). These class designations are directly related to the rent charged for an apartment of a given size.

Figure 24 . Of the unsubsidized buildings you have designated entirely or partly smoke free, have any been ... ?

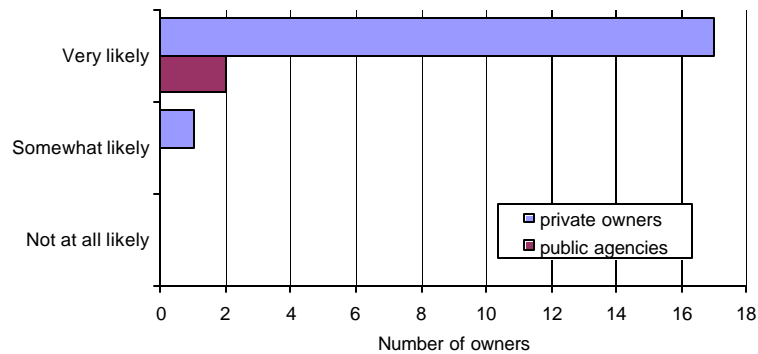


Actual Effects of Smoke-Free Designation on Turnover, Vacancy Rate, Rent Charged, Staff Time and Complaints

The owners we interviewed who have designated smoke-free buildings in Minnesota have had positive experiences with them:

- Nineteen of the 20 owners of smoke-free buildings said they are very likely to continue offering smoke-free rental buildings or units in the future, while only one said s/he was somewhat likely to continue offering them (Q30)(Figure 25).

Figure 25. How likely are you to continue offering smoke-free rental buildings or units in the future?

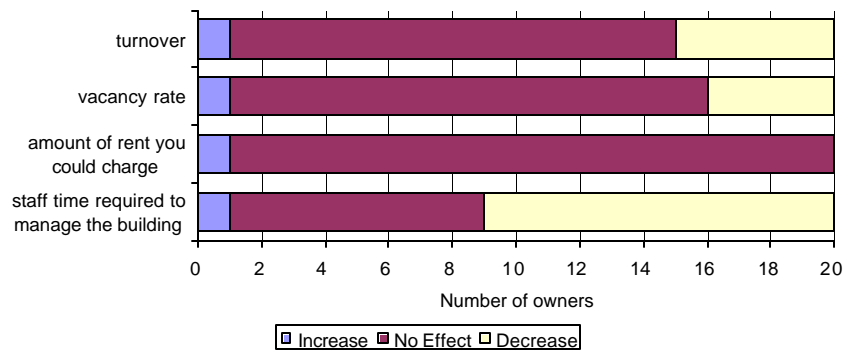


- Four owners said that the smoke-free designation had decreased the vacancy rate and 15 said it had had no effect, while only one said it had increased vacancy (Q32) (Figure 26). Vacancy is a key factor in the profitability of rental property, since it directly affects gross income.
- Five of the 20 owners said that the smoke-free designation had decreased turnover and 14 said it had had no effect on turnover, while only one said it had increased turnover (Q31). Turnover is another key factor in the profitability of rental property, since there are costs associated with showing the unit, preparing it for new tenants and so on.
- Nineteen owners said that the smoke-free designation had had no effect on the amount of rent they could charge, while one said s/he had been able to increase the rent charged by \$10/month (Q33, Q33A).

- Eleven owners said that the smoke-free designation had decreased the amount of staff time required to manage the building, while eight said it had had no effect and only one said it had increased the amount of staff time required (Q34).

When the eleven owners who said the amount of staff time had decreased were asked why (Q34b), they pointed overwhelmingly to decreased time spent preparing

Figure 26. ...did the smoke-free designation increase, decrease or have no effect on...



apartments for turnover – less time shampooing or replacing carpets, washing walls and applying multiple layers of paint or using Kilz™ to cover nicotine stains,¹¹ getting nicotine off blinds and grout in the tiles, replacing carpet, screens and other items damaged by smokers, etc. They also mentioned less litter around the entrance and on the grounds (no cigarette butts), less time spent cleaning common areas, less leasing time because people will rent a unit faster if it has a fresh odor and fewer tenant complaints because “smokers tend to have more late-night parties than non-smokers.” The one owner who said staff time had increased said this was due to the need for someone to monitor and enforce the no-smoking rule (Q34a).

- Only three of the owners said that the smoke-free designation had led to any complaints from tenants (Q35). These included both complaints by non-smoking tenants about other tenants or their guests smoking and complaints by smoking tenants feeling they should be able to smoke in the building. One owner remarked that s/he had had to “enforce our leases” when people violated the no-smoking policy. However, no owners reported any legal actions against them arising from the smoke-free designation.
- When asked whether there were any other positive or negative consequences of the smoke-free designation (Q36), these owners mentioned only positive items (see verbatim comments in Appendix C), including:
 - finding that smoke-free designation is a positive selling point when they have an opening and that the vacancy fills quickly,
 - reduced costs and effort (dealing with smells in carpeting, painting, etc.) in refurbishing units at turnover,
 - less likelihood of fire,
 - unsolicited positive feedback from tenants about it, for health, fire safety or other reasons (and negative comments from tenants in the buildings where they haven’t done it),
 - reduction in allergy attacks for tenants allergic to cigarette smoke,
 - not having the odor in the building, and
 - not having cigarette butts and full ashtrays to deal with.

Further information regarding the cases with negative experiences may help owners in evaluating their significance:

- The owner who said the smoke-free designation had increased the vacancy rate has ten buildings (107 units) and is phasing in a smoke-free policy in all ten of them. The buildings are all private, unsubsidized properties and include Class B and C buildings. This owner said that the smoke-free designation had decreased turnover, had no effect on the amount of rent s/he could charge, had decreased the amount of staff time required to manage the buildings and had led to no tenant complaints. Notwithstanding the increase in vacancy rate, s/he said s/he was very likely to continue offering smoke-free buildings or units in the future.
- The owner who said the smoke-free designation had increased turnover has five buildings (36 units) and is phasing in a smoke-free policy in four of them. The buildings are all private, unsubsidized properties and include Class A, B and C buildings. This owner said

¹¹ Nicotine may not actually be the ETS compound responsible for the stains, but it is the compound identified by the respondents.

that the smoke-free designation had decreased the vacancy rate, increased the amount of rent s/he could charge for the apartments by \$10/month, decreased staff time required to manage the buildings and led to no tenant complaints. Notwithstanding the increase in turnover, s/he said s/he was very likely to continue offering smoke-free buildings or units in the future.

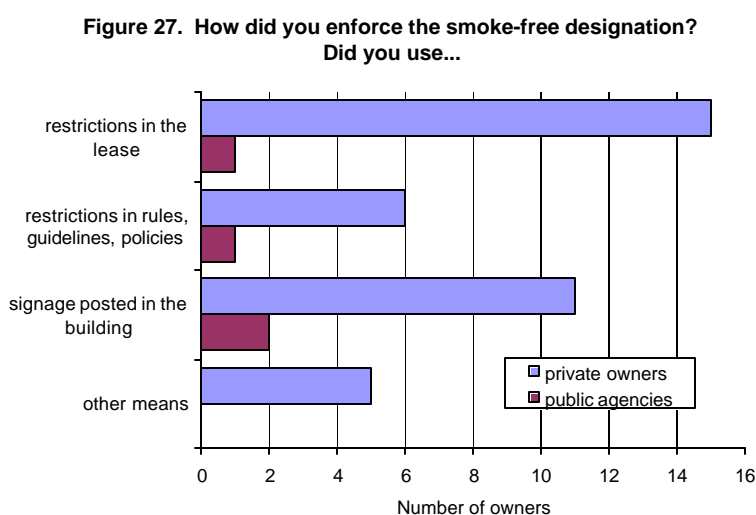
- The owner who said that the smoke-free designation had increased the amount of staff time required to manage the buildings has 51 buildings (4500 units) and is gradually phasing in a smoke-free policy in 50 of them. The buildings include both private, unsubsidized properties and privately-owned HUD Section 8 subsidized project-based housing, and include Class A, B and C buildings. This owner said the smoke-free designation had had no effect on turnover, vacancy or amount of rent s/he could charge, and had led to no complaints from tenants. However, s/he said s/he did not know whether the increased amount of staff time required was worth it in terms of other benefits or not, and this owner was only somewhat likely to continue to offer smoke-free buildings in the future. This is the only one of the three whose overall evaluation of their experience appears to be somewhat qualified, rather than positive.

One point worth noting is that all of the owners who reported negative experiences were gradually phasing in the policy and did not have it fully in place. Some problems that occur during phase-in may be reduced or eliminated once a building is entirely smoke-free.

Methods Used to Enforce Smoke-Free Designation

The most common method these owners have used to enforce the smoke-free designation is restrictions in the lease, used by 16 of the 20 owners of smoke-free buildings (Q29)(Figure 27). Thirteen have used signage posted in the building, and seven have used restrictions in rules, guidelines or policies. Five owners said they had used other methods, which included

advertising as smoke-free, having a verbal agreement with the renters, stating on the application that the unit is smoke-free, having renters sign a notification, relying on other tenants to tell the owner that people are smoking in the building and depending on tenants' mutual respect.

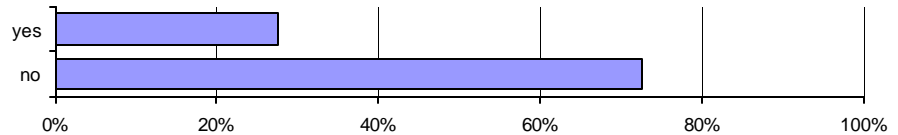


Perceptions of Smoke-Free Buildings among Owners with No Direct Experience

Awareness of Smoke-Free Buildings, Perceptions of Marketability and Importance

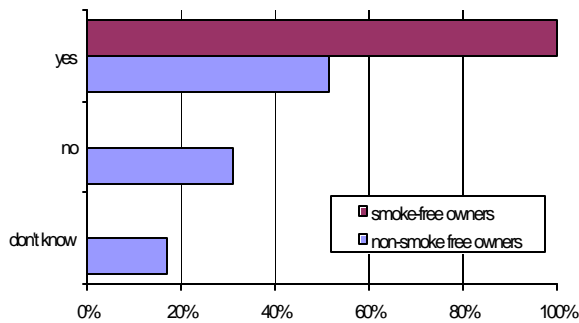
Among those we interviewed who have not designated smoke-free buildings, 72% said they were not aware of any residential rental buildings or rental units in

Figure 28. Are you aware of any residential rental buildings or rental units in Minnesota that have been designated smoke-free?



Minnesota that have been designated smoke-free (Figure 28).¹²

Figure 29. In the market segments you rent to, do you think there is a viable market for smoke-free rental housing if it were made available?



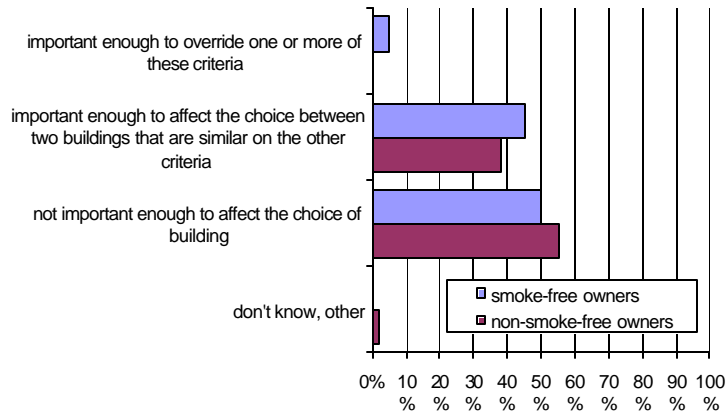
A little more than half (52%) of the owners we talked to who have never designated any buildings smoke-free feel that there is a viable market for smoke-free rental housing in the market segments they rent to (Q37)(Figure 29). Thirty-one percent don't think there is, and 17% said they don't know. Private owners tended to be somewhat more likely than public owners to think there is a viable market for smoke-free units in the market segments they rent to (58% vs. 40%). One hundred percent of the owners of smoke-free buildings we talked to feel there is a viable market for smoke-free

rental housing in the markets they rent to.

¹² Oddly, 15% of owners who have designated smoke-free buildings also said they were unaware of any. Presumably they were thinking of buildings other than their own.

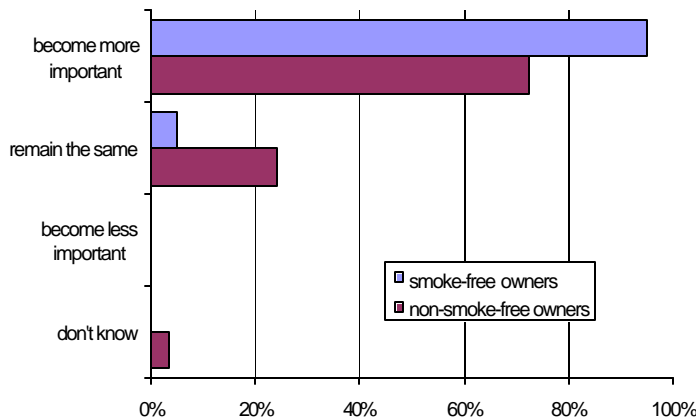
Generally, the owners interviewed consider location, rent, and size of apartment or number of bedrooms to be the three most important criteria tenants consider in choosing an apartment building (Q39). Of all the owners interviewed, only one smoke-free owner thought that smoke-free designation was important enough to tenants to override one or more of their top three criteria in choosing a building (Q40)(Figure 30). Among both the smoke-free and non-smoke-free owners, less than half thought smoke-free designation would be important enough to affect the choice between two buildings that were similar in terms of tenants' top three criteria. Half or more of each group considered smoke-free designation not important enough to affect the choice of building at all.

Figure 30. In the market segments you rent to, how important is smoke-free designation relative to the top three criteria tenants consider in choosing an apartment?



Both the smoke-free and non-smoke-free owners interviewed think that the issue of smoke-free rental housing will become more important in the future, although the smoke-free owners were significantly more likely to think so (95% vs. 72%)(Q38)(Figure 31). Within the non-smoke-free owners, private owners tended to be more likely than public owners to think that the issue will become more important in the future (79% vs. 60%).

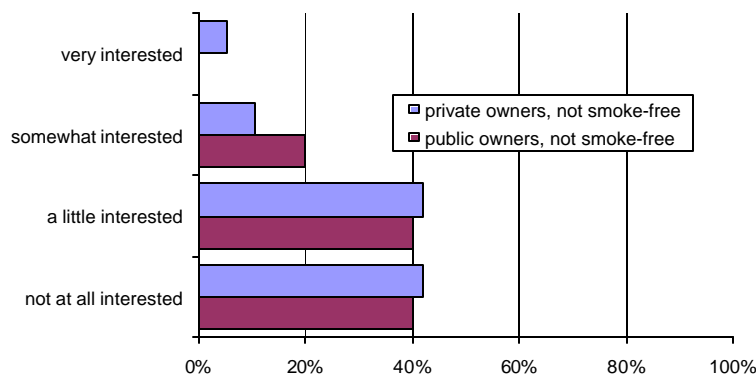
Figure 31. In the future, do you think the issue of smoke-free rental housing will...?



Interest in Designating Smoke-Free Buildings

Even though a fair number of the owners who have not designated smoke-free buildings think that there is a viable market for it and that the issue will become more important in the future, they expressed little interest in designating one or more of their own buildings smoke-free. Only 3% of these owners were very interested; 14% were somewhat interested, 41% were a little interested, and 41% were not at all interested (Q47)(Figure 32). Private and public owners who have never designated any smoke-free buildings had a roughly equal lack of interest in doing so.

Figure 32. How interested are you in designating one or more of your buildings smoke-free?



Reasons for Not Designating Smoke-Free Buildings

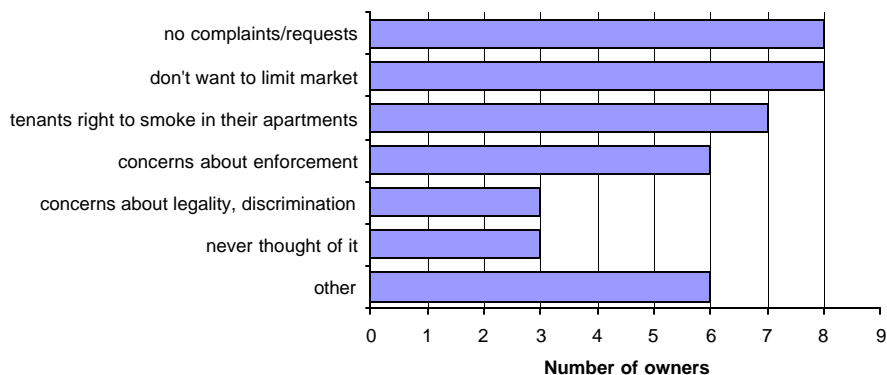
When asked why they had never designated any buildings smoke-free (Q22), these owners offered a number of different reasons (Figure 33) . These included:

- that they've had no complaints about smoke or have had no requests to do it,
- feeling that the main market are smokers, that most of the people they rent to are smokers, concern about vacancies, wanting to remove as many roadblocks as possible, not wanting to limit someone who smokes who wants to rent,
- feeling that tenants have the right to smoke in their apartments, feeling that enforcing it would be an invasion of privacy,
- having to enforce it, having to police it, feeling that it can't be enforced,
- questioning whether it is legal, or discriminatory, or contrary to federal regulations regarding how to assign units in subsidized housing,
- never having thought of it,
- miscellaneous other reasons.

Private owners most often brought up a lack of complaints or requests from tenants, feeling that the main market are smokers, policing/enforcement concerns and tenants' right to smoke. Public

owners most often brought up the issues of discrimination, legalities, or federal regulations (which were only brought up by these owners) and tenants' right to smoke.

Figure 33. Why [have you never designated any of your residential rental buildings smoke-free]?

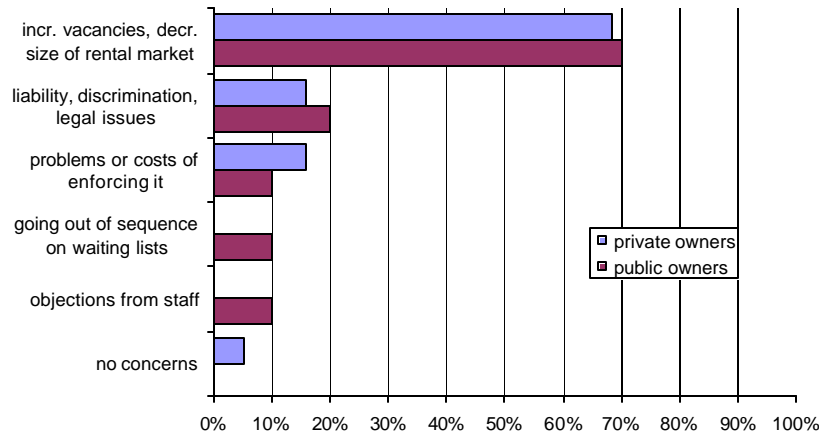


Concerns about Designating Smoke-Free Buildings

The owners who had not designated any smoke-free buildings were asked in an open-ended way what concerns they would have about designating one or more of their buildings smoke-free, and which of these concerns they saw as most important and second most important (Q44, 45, 46). Among the private owners, 68% identified increases in the vacancy rate or decreases in the size of the rental pool as the most important concern, 16% identified liability or legal issues, 16% identified difficulties or costs of enforcing it and 5% said they had no concerns (Figure 34). Among the public owners, 70% identified increases in the vacancy rate or decreases in the size of the rental pool as the most important concern, 20% mentioned concern about discrimination, and 10% each mentioned concern about going out of sequence to fill smoke-free units from the waiting list, potential objections from staff, and difficulties enforcing it.¹³ Only seven owners mentioned a second concern. Among the five private owners who did, three mentioned policing, enforcement, enforcement costs and how to handle violators, one mentioned discrimination and one mentioned the right of people do to what they want in their own living space. Among the two public owners who gave a second concern, one mentioned legal costs to enforce the designation and one mentioned freedom of choice for smokers.

¹³ Totals add to more than 100% because one private owners and one public owner refused to identify just one most important concern.

Figure 34. Which [of your concerns about designating one or more buildings smoke-free] do you see as most important?



Anticipated Effects of Smoke-Free Designation on Vacancy, Turnover, Staff Time, Legal Costs and Rents, Compared with Actual Effects

When owners who have not designated smoke-free buildings were asked whether they thought smoke-free designation would increase, decrease or have no effect on vacancy, turnover and other variables (Q48), their expectations were substantially more negative than the actual experience of smoke-free owners in Minnesota to date:

- Fifty eight percent of private owners and 30% of public owners who had not designated any smoke-free buildings said that smoke-free designation would *increase* vacancy rates, while only 5% of smoke-free owners said that smoke-free designation actually had increased their vacancy rate (Figure 35). Only 5% of private owners and 10% of public owners thought smoke-free designation would *decrease* vacancy rates, while 20% of smoke-free owners reported that this had happened in their buildings.
- Sixteen percent of private owners and 20% of public owners who had not designated any smoke-free buildings thought that smoke-free designation would *increase* turnover, whereas only 5% of smoke-free owners said this had occurred (Figure 36).
- Thirty-two percent of private owners and 20% of public owners thought that smoke-free designation would *increase* the amount of staff time required to manage a building, whereas only 5% of smoke-free owners said this had occurred (Figure 37). Only 21% of private owners and 10% of public owners thought smoke-free designation would *decrease* the amount of staff time required to manage a building, whereas 55% of smoke-free owners said this had occurred.
- Forty-seven percent of private owners and 20% of public owners said that smoke-free designation would *increase* their legal risks and costs. This question was not asked of smoke-free owners in the same way, but only three of the 20 smoke-free owners reported any complaints from tenants, with only one of these saying he had had to “enforce his lease.” None of the smoke-free owners reported any legal actions against them.

- The only area where owners who have not designated smoke-free buildings appear to be more optimistic than warranted by experience to date regards the amount of rent they could charge: 26% of the private owners (but none of the public owners), thought they would be able to increase the amount of rent charged, whereas only 5% of smoke-free owners said the smoke-free designation had increased the amount of rent they could charge (Figure 38).

Figure 35. Vacancy Rate: Actual Effect of Smoke-Free Designation, Compared with the Expectations of Owners with no Direct Experience

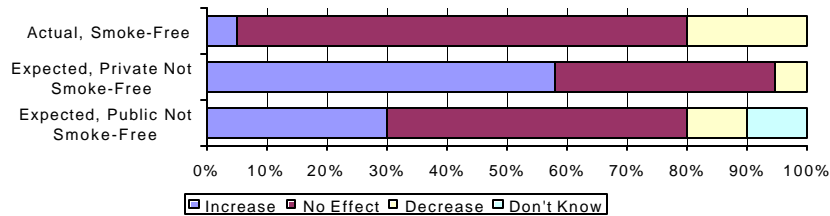


Figure 36. Turnover: Actual Effect of Smoke-Free Designation, Compared with the Expectations of Owners with No Direct Experience

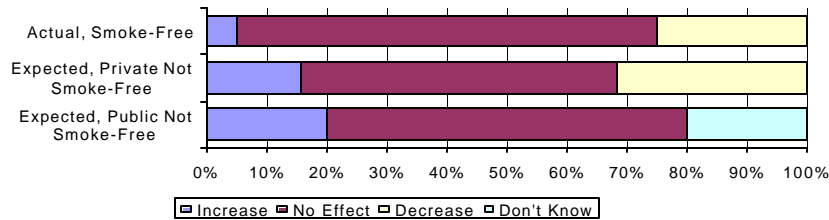


Figure 37. Staff Time to Manage Building: Actual Effect of Smoke-Free Designation, Compared with the Expectations of Owners with No Direct Experience

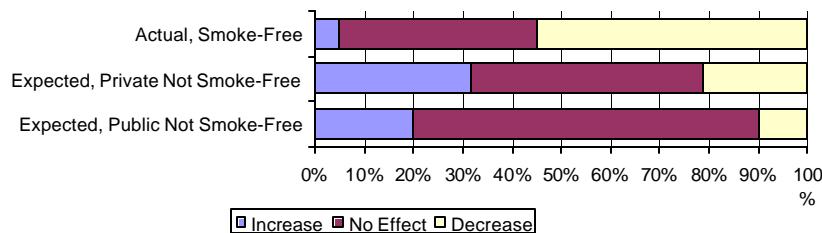
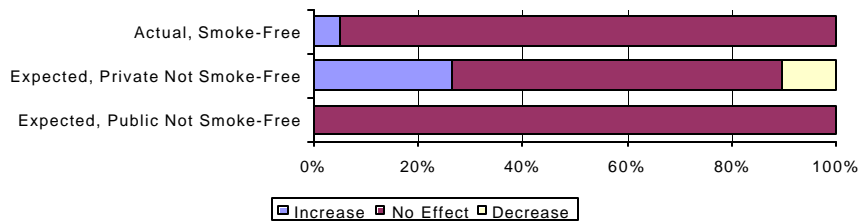


Figure 38. Rent that Can Be Charged: Actual Effect of Smoke-Free Designation, Compared with the Expectations of Owners with No Direct Experience

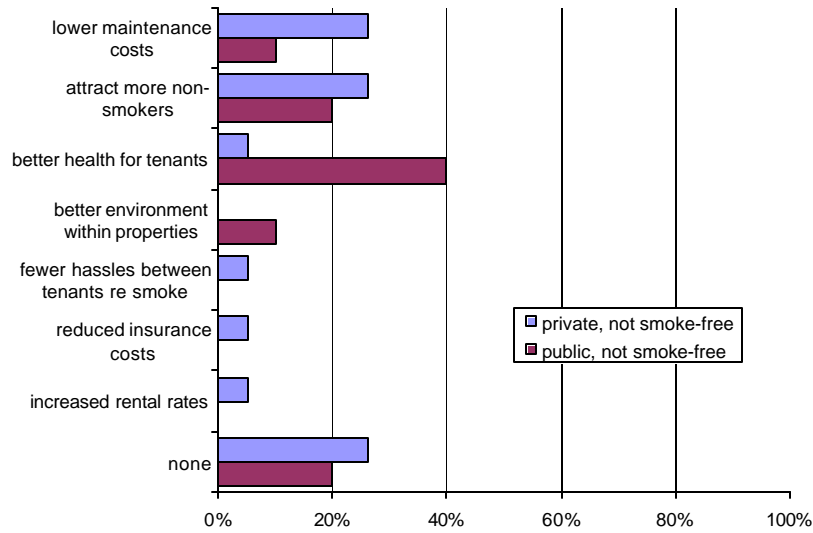


Perceived Benefits of Smoke-Free Designation

The potential benefits of smoke-free designation mentioned most often by the owners who had never designated any buildings smoke-free were lower maintenance costs (37% of private owners and 30% of public owners), attracting more non-smokers (32% of private owners and 20% of public owners), fewer hassles between tenants over smoke (21% of private owners and 20% of public owners), a better environment within the properties (21% of private owners and 10% of public owners) and better health for tenants (5% of private owners and 40% of public owners). Other benefits mentioned included reduced insurance costs, increased rental rates, reduced fire hazards, attracting “better” tenants and offering more choice to tenants. Twenty-six percent of private owners and 20% of public owners said they saw no potential benefits of smoke-free designation.

When the owners were asked which benefits they considered to be most important, private owners mentioned lower maintenance costs (26%) and attracting non-smokers (26%) most often. Public owners were most likely to mention health benefits for renters, especially renters with health problems (40%) and attracting non-smokers (20%) (Figure 39). The benefits identified as the second most important were fairly uniformly distributed among the various benefits (see Appendix C).

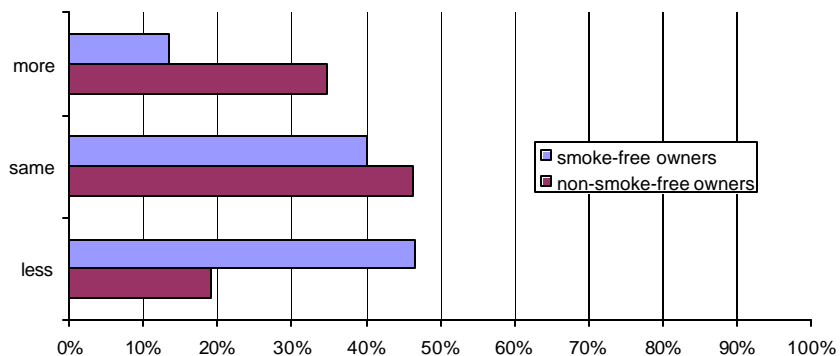
Figure 39. Which [of the benefits of designating smoke-free buildings] do you see as the most important?



The Option of Smoke-Free Units, Rather than Smoke-Free Buildings

Only four owners said that they had ever designated any units within buildings smoke-free, rather than whole buildings (Q24). Two of these were owners who said they had designated completely smoke-free buildings, and two were owners who said they were gradually phasing in a smoke-free policy in one or more buildings(Q22). We asked whether, in general, owners would have more interest, less interest, or the same level of interest in designating smoke-free units or areas within buildings as compared with designating entire buildings smoke-free (Q54). Twenty-seven percent of them said they would have more interest, 29% said they would have less interest, and 44% said they would have the same level of interest (Figure 40). Owners who have never designated smoke-free buildings tended to have more interest in the option of smoke-free units.

Figure 40. Would you have more, less or the same interest in designating smoke-free units as in designating entire buildings smoke-free?



Information to Guide Later Tasks of the Research Project

Input to Renter Survey

The objectives of the planned renter survey are (1) to quantify and document the extent and severity of perceived problems with ETS transfer among Minnesotans who live in rental housing, (2) to provide owners with solid information regarding the marketability of smoke-free rental housing and the importance of ETS-free units to renters and (3) to examine how problems with ETS transfer vary by building type and location within buildings, to guide the buildings research.

To focus our work on that task, we asked owners, “If you could talk to a number of Minnesota renters about the issue of secondhand smoke in apartment buildings or about their interest in smoke-free buildings, what would you ask them?” (Q50).

- The question of interest to the greatest number of owners is how important a smoke-free building would be to renters. Overall, 45% of the owners we talked to raised this question. It was significantly more likely to be raised by the Public group (75%) than by the Private, general or Private, KSFB groups (35 and 36% respectively).
- The next most commonly raised question was whether renters would be willing to pay more to live in a smoke-free apartment. Overall, 31% of owners interviewed raised this question. The Private, general group was significantly more likely to raise this question than the Private, KSFB or Public groups (46%, vs. 9% and 17%).
- The third most common question was whether tenants have experienced a problem with secondhand smoke in their residence, raised by 14% of the owners.
- Eight percent of the owners wanted to know how much more tenants would be willing to pay to live in smoke-free apartments. Only the Private, general group raised this question; presumably the Private, KSFB group already feel they have a handle on this and the Public group have rent levels determined by regulatory rather than market forces.
- Eight percent of the owners wanted to know whether tenants would be willing to move to a different location if it were smoke-free.
- Six percent of the owners wanted to know whether renters would be willing to help enforce smoke-free designation.
- Six percent of owners wanted to ask whether renters are aware of the health impacts of tobacco smoke.

A wide range of other questions were raised by one or two owners each (see verbatim responses in Appendix C). Many of these were variations on the theme of importance or interest – would renters continue to renew their leases if a building were smoke-free, would they stay longer if a building were smoke-free, would they rule out a building if it were or were not smoke-free, would they rent a unit in a smoke-free building in preference to one in a smoking-permitted building, would they like to see more smoke-free buildings, would they be willing to wait longer on a waiting list to get a smoke-free unit, and so on. Others raised different issues, such as what type of buildings have trouble with secondhand smoke, whether renters would be willing to cooperate to make part of a building smoke-free if they were already living there, whether they

are aware of the damage smoke does to buildings, whether they feel safe with a smoker in the building and so on.

Legal Research

To prepare for the legal research, we asked owners what legal issues concerning smoke-free buildings and/or secondhand smoke in buildings they would like to know more about (Q51).

- The most commonly raised issue was the legal recourse owners have to enforce a smoke-free rule (see verbatims). This question was raised by 24% of the owners we interviewed, all of whom were in either the Private, general or Private, KSFB group. Is it a breach of the lease? Can the owner terminate the lease and evict the tenant? Will they have any clout behind them if they go into court? How much do they have to do to prove someone is smoking before they can take action?
- Fourteen percent of owners wanted to know whether smoke-free designation would constitute discrimination against smokers, or discrimination against lower income people because more lower income people smoke. This question was the issue most often raised by the Public group.
- Fourteen percent of the owners wanted to know what liability they would have if they had a smoking-permitted building and someone claimed to have gotten sick from secondhand smoke. Could an owner be sued if people smoked in their building and someone got cancer or otherwise got sick? Could a tenant take another tenant to court? Where does an owner's liability fall and what do they need to do to cover themselves if secondhand smoke is traveling to other units from a tenant who smokes? Would the owner be covered if s/he had responded reasonably to address secondhand smoke complaints at the time, but, nevertheless, someone who had lived in the building for three or four years developed lung cancer 15 years later and claimed it was caused by secondhand smoke in the building?
- Ten percent of the owners wanted to know what liability they would have if they said a building was smoke-free and someone smoked in it. How much risk or liability is there? Would the landlord or the renter who smokes or allows someone to smoke in their apartment be liable? If a city has fines for smoking in a common area, who would be fined if someone smoked there, the landlord or the person who smokes?
- Six percent of the owners wanted to gauge the relative amount of liability for an owner who has smoke-free buildings versus an owner who has smoking-permitted buildings.
- Four percent of the owners wanted to know what HUD's presence was on this issue or what the regulations would be relative to public housing admissions.
- Four percent of the owners wanted to know whether there are any statutes regarding smoke-free designation so that owners would know what to do and how to do it, or legislation that specifically permits "segregation" of non-smokers.
- Other legal questions were the outcomes of any lawsuits in this area, an overview of laws in this area, what can be done, and whether smoke-free designation is legal.
- Eighteen percent of owners said there were no legal issues they wanted to know more about. Some of these were smoke-free owners who feel they already know enough from their own experience and/or keep up on trends in this area, while others were non-smoke-free owners who were not interested in legal information on this subject or who didn't know what information they would want.

- Twelve percent of owners raised essentially non-legal issues. These were owners who had not designated smoke-free housing. They wanted to know whether smoke-free designation has been successful, what the response has been, what experience owners have had in general, and with enforcement in particular, how you implement and manage it, how you effectively monitor tenants' behavior and whether it would affect insurance rates and how much. One owner wanted to know how s/he could improve the ventilation in smoking-permitted buildings to prevent infiltration of secondhand smoke from one unit to another while still having adequate ventilation.

One of the planned objectives of the legal research is to develop a model smoke-free lease clause that will provide a meaningful level of assurance of smoke-free homes to renters while holding the risks to property owners in providing smoke-free rental housing under current law to a level that will encourage smoke-free designation. To assess the perceived value of such a model lease, we asked owners, if the Multi Housing Association, NAHRO and others were to develop a model smoke-free lease clause, how much more likely they would be to designate smoke-free buildings (Q52). Overall, 27% said they would be much more likely to designate smoke-free buildings. This included 45% of the owners who already have some smoke-free buildings, and 14% of those who do not. It included 33% of the Private group. Fourteen percent of the owners interviewed said they would be somewhat more likely to designate smoke-free buildings, 29% said they would be slightly more likely to do so, and 28% said they would be no more likely to do so.

Another objective of the legal research is to identify changes to statutes, ordinances and regulations that would facilitate smoke-free rental housing and reductions in ETS transfer in smoking-permitted housing. We asked the owners who do not have any smoke-free buildings whether they think that changes in statutes or regulations are needed in order for them to be able to designate one or more of their buildings smoke-free (Q49). Overall, 48% of these owners said yes.

When asked what changes in statutes or regulations are needed (Q49a), four private owners mentioned removing the liability for the owner if people violate the smoke-free rule, holding the owner blameless for any effect of the non-smoking rule, or at least clarifying how much liability the owner has to the tenants that want a smoke-free environment if someone else smokes. Three private owners mentioned something to make it clear that owners can designate smoke-free housing, that it is not discrimination against smokers and that a tenant does not have a legal right to smoke in his own apartment. One private owner said that attorneys had told him it could not be done, because unlike a hotel, an apartment is a renter's home. Two private owners said they simply would not designate smoke-free housing. Three public owners mentioned statutes or regulations, such as admissions regulations, specifically permitting smoke-free designation in public housing. Two mentioned discrimination and fair housing issues. One public owner said that they cannot restrict what tenants do in their own homes.

Buildings Research

The purpose of the planned buildings research is to measure typical contaminant dispersal and air movement among units in a sample of multifamily buildings in Minnesota, to treat the buildings to reduce air movement, and to measure the reduction in air movement due to the treatments.

A number of questions discussed previously will provide useful insight in planning the buildings research, such as the questions about how secondhand smoke gets into tenants' apartments from elsewhere in the building, what types of buildings are most likely to experience regular or recurring transfer of secondhand smoke, and the amount owners would be willing to spend to implement measures to reduce secondhand smoke transfer.

We asked owners what types of information they would like to get out of research to measure air movement between apartments before and after modifications to reduce air movement (Q59). Twenty-two percent of the owners wanted to know how much the modifications would cost (or, in one case, would cost to operate). Eighteen percent wanted to know how much contamination is in the air and the indoor air quality before and after treatment. Fourteen percent wanted to know the rate of air flow or air exchange and how it changed after treatment. Fourteen percent wanted to know what modifications would be made to reduce secondhand smoke transfer. Twelve percent wanted to know the impact on tenants' health, and 10 percent wanted to know effects, effectiveness or benefits generally. Other questions raised included why and how smoke moves between units, whether there would be a reduction in odors from the treatments, whether tenants would notice a difference, what the cost benefit ratio would be, what amount of disruption to tenants' lives the treatments would entail, whether tenants would be willing to pay more rent, or simply any and all information that would be gathered..

Twenty-eight owners indicated that they would be interested in providing a building for testing, assuming that the project would pay most or all of the cost of treatments and provide an incentive to tenants to offset any inconvenience (Q60). These owners manage a total of 320 buildings and will provide the primary pool of candidates for testing.

Financial Analysis

The purpose of the planned financial analysis task is to quantify the financial benefits that smoke-free buildings can offer to owners, to provide a tool that can be used in promoting smoke-free designation. To help focus our research in this area, we asked owners what line items of their operating budget they think would change, either up or down, if they designated a building smoke-free (Q53).

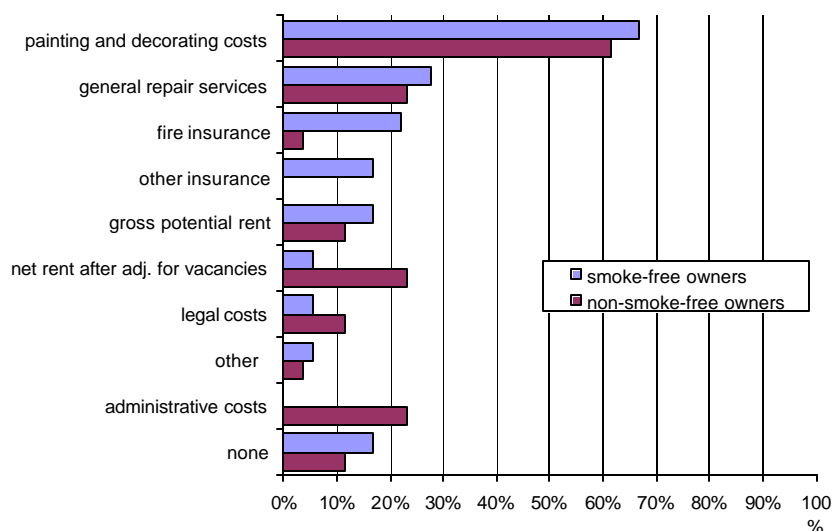
Among owners who actually have designated smoke-free buildings, 67% identified painting and decorating costs, 28% general repair services, 22% fire insurance costs, 17% other insurance (liability, property or unspecified), 17% gross potential rent, 6% net rent after vacancies, 6% legal costs, and 6% carpet cleaning and janitorial budget as costs they thought would change. We know that these owners would expect a downward change in painting and decorating costs, general repair services, and carpet cleaning and janitorial costs, based first on the fact that a quarter of these owners said that turnover had decreased (Q31), and second on the comments

over half of them made earlier in explaining why smoke-free designation had decreased the staff time required to manage their buildings (Q34b). Logic suggests that fire insurance costs and probably other insurance costs would also go down.

Among owners who have not designated smoke-free buildings, 62% identified painting and decorating costs, 23% general repair services, 23% administrative costs, 23% net rent after adjustment for vacancies, 12% gross rent, 12% legal costs, 4% fire insurance and 4% said they did not know. It is likely that these owners, like the smoke-free owners, expect painting or decorating costs, general repair services and fire insurance costs to go down. However, since many of these owners thought that smoke-free designation would increase vacancy rates, increase their legal risks and costs and increase the staff time required to manage a building (Q48), it is likely that they are anticipating a decrease in net rent and an increase in administrative and legal costs.

These responses provide clear direction regarding the line items that should be scrutinized in the financial analysis. The larger than anticipated number of smoke-free owners also opens the possibility that we can gather actual financial information from them, if they will share it, rather than relying on analytical estimates.

Figure 41. What line items of your operating budget do you think would change... if you designated a building as smoke-free?



Interest in Results of Planned Research Activities

Ninety-six percent of the owners interviewed said they would be interested in receiving the results of a survey of renters on these issues. Ninety percent said they would be interested in the results of legal research, financial analysis, and air movement measurements.

DISCUSSION

Owners are certainly aware of some problems with secondhand smoke transfer in rental properties in Minnesota: about 41% mentioned tobacco smoke odor as either the most common source or an additional significant source of objectionable air in buildings they manage, and over half said that at least a few of their buildings experience ETS transfer on a regular or recurring basis. ETS transfer also appears to have a small but noticeable impact on issues important to apartment owners' business, with about one in five saying that it sometimes or often is a factor in potential tenants' decision whether to rent; is a factor in existing tenants' decision to move; or requires significant staff time to resolve complaints.

The routes of secondhand smoke movement identified by owners as the most common (via the corridors/hallways, via the mechanical ventilation system, via cracks in walls, floors, etc.) are related to the design, construction and operation of the building and its ventilation systems, which suggests that movement of secondhand smoke could be reduced through appropriate treatments. Only entry of secondhand smoke via open windows, identified as the most common route by about one in 14 owners, is beyond the reach of any practical building modification and would require a change in the owners' policies instead. Only a quarter of owners interviewed said they would be very interested in learning about ways to reduce transfer of secondhand smoke and other objectionable air in apartment buildings, though, and over two-thirds said they would be willing to spend less than \$250 per apartment to reduce this air movement.

Owners who have already designated at least one smoke-free building are much more likely to see ETS transfer as very important and as a major health issue for tenants, and are much more likely to be very interested in learning about ways to reduce ETS transfer. Among other owners, only about one in six sees ETS transfer as a major health issue for tenants, and only one in seven is very interested in learning about ways to reduce it.

The 20 smoke-free owners we were able to interview exceeded the number we had expected, providing a substantial amount of information on experience with smoke-free designation in Minnesota. These owners' experience with smoke-free housing appears to be strongly positive, and indeed, all but one said they are very likely to continue offering smoke-free buildings or units in the future.

There is a general perception that publicly-assisted housing is subject to statutory and regulatory constraints that would make smoke-free designation more difficult. This survey shows that there is some track-record of designating subsidized housing in Minnesota smoke-free. Whether this is actually consistent with the statutes and regulations governing this housing will be assessed during the legal research portion of the project.

It is sometimes suggested that certain classes of buildings, or buildings with certain types of tenants, are easier to designate smoke-free than others, that is, that the smoke-free designation might be less likely to lead to vacancy and turnover problems, or might be easier to enforce, etc. with certain types of clientele. Given the mix of buildings they have designated smoke-free, the positive experience of smoke-free owners interviewed here indicates that smoke-free designation

can be successful across a range of building classes (corresponding directly to rent levels and by extension to tenant incomes), and in properties targeting tenants in various stages of life.

Three quarters of the owners who have never designated any smoke-free buildings are also unaware of any such buildings in Minnesota, and this is significant, since it means that these owners are not aware of the limited but strongly positive experience with smoke-free designation. These owners have a very low level of interest in designating smoke-free buildings, and have considerably more negative expectations of the effects of smoke-free designation than is borne out by the experience of smoke-free owners in Minnesota to date. It is to be hoped that disseminating information on the successful experiences of smoke-free owners and generating market research on renters' interest in smoke-free housing will increase the level of interest in it among Minnesota owners.