

Taking out the Garbage:
A Study of Providence's Environmental Enforcement
System

by
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Abstract

Most of us take for granted the sanitation levels of the cities in which we live. We notice poor conditions but we pay little attention to good conditions. A dedicated environmental enforcement team, a component of the City's Department of Public Works (DPW), is responsible for ensuring the sanitary upkeep of the City of Providence. Though DPW has been responsible for environmental enforcement in Providence for nearly sixty years, it did not establish an actual environmental enforcement division until 1988. In 1995 this division underwent a major restructuring in an effort to become proactive. While the productivity of this system has undeniably increased since changes were made in 1995, no formal study evaluating the strengths and weaknesses of Providence's environmental enforcement system has ever been conducted.

This thesis presents a detailed study of Providence's environmental enforcement system. I attempt to answer the question: How can Providence's environmental violations be reduced? This reduction is a two-step process that involves both improving the existing system and implementing plans to discourage people from committing environmental offenses. I answer a number of questions about the current environmental enforcement system and offer both specific and general recommendations for strategies to reduce the number of environmental violations in Providence.

My analysis revealed important findings about the environmental enforcement system. These discoveries lead me to suggest a number of modifications that can be made to realize the goal of reducing environmental violations in Providence. Major findings and recommendations are listed below, roughly in order of significance.

Findings:

- violations often occur in street clusters
- more than 75 percent of the total tickets issued are for only two violations: early/improper storage of household trash, and littering
- more than one-third of the total tickets issued are to repeat violators
- more than twice as many violations are to absentee landlord residences than are to owner occupied ones
- in 191 out of 273 cases in which warning letters were sent, the warning letter was **not** followed by a ticket
- in 121 out of 142 cases in which verbal warnings were given, the warning was **not** followed by a ticket
- not all of the inspectors have the same environmental inspection approach

Recommendations:

- implementation of a real-time inspection system; this would involve inspectors carrying around hand-held computers on which they enter information about violations as they encounter them

- targeting of enforcement efforts at street clusters
- modification and updating of DPW's database
- increase of sanctions for repeat violators
- mandating of warning letters
- greater emphasis placed on giving verbal warnings
- more distribution of information about Providence's environmental regulations to its residents
- increase of environmental education efforts, particularly to children
- formalization of the relationship between DPW and the Providence Police Department
- greater encouragement by DPW for residents to use its complaint system

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Chapter 1
Introduction

During the past few years, environmental enforcement in Providence has undergone many changes. The Department of Public Works, the City's administrative arm responsible for environmental enforcement, has restructured its inspection program in an effort to be *proactive* rather than *reactive*. In November 1996, an environmental court calendar was established to hear only environmental cases on one day each week. Until January 1998, the court met on Monday mornings, at the same time as traffic court. In January 1998, however, the environmental court time was moved to Tuesday evenings with the joint purpose of giving the court its own identity, and making the meeting time more convenient for people who work during the day¹. Establishing this specific court calendar was intended to give more priority to environmental offenses, which previously had been mixed together with all municipal offenses. Currently the City is revising its environmental ordinances written in 1949 in an effort to make them both more relevant to current conditions and conform to state law. All of these efforts were made with the short-term goal of holding accountable those people who commit environmental offenses, and the long-

¹ At time of publication (May 1998), the City is about to expand the court calendar to five days per week in order to catch up on the back-log of cases.

term goal of discouraging people from committing such offenses. Ultimately, this should decrease the number of violations in Providence.

My study involves a careful examination of the environmental enforcement process and the results of this process. The purpose of this study is two-fold: 1) to recommend further improvements that the City can make to its enforcement procedures; and 2) to suggest measures that the City can take to discourage people from committing environmental offenses in the future. My ultimate goal is the same as the City's: reducing the number of environmental violations that occur in Providence. I intend my study to be of use to City Hall and the Department of Public Works.

The History of Providence's Environmental Enforcement Efforts

The Department of Public Works (DPW) has, for nearly 60 years, been responsible for the enforcement of the following 11 ordinance violations²:

1. Early or improper storage of household trash (e.g. prematurely putting trash on the curbside or not placing it in its proper receptacle)
2. Early or improper storage of commercial trash
3. Trash hauling without license
4. Violation of the dumpster ordinance
5. Littering
6. Depositing of garbage into a container of another
7. Illegal dumping of over one cubic yard of litter
8. Illegal dumping of heavy litter
9. Violation of the recycling ordinance³
10. Scavenging
11. Other

For most of this time the City's primary environmental enforcement-related activities consisted of rat bating and lot clearing. In 1988 DPW established its Environmental Enforcement Division. Until 1995 DPW was generally reactive in its approach to environmental enforcement. All tickets (or Notice of Violations- NOVs) were issued in response to complaints; there were few routine inspections. Inspectors specialized in particular areas: two inspectors

² Providence Code. Department of Inspection and Standards. Sec. 12-80.

concentrated on recycling, one on abandoned cars, one on rodents, and one handled all other problems. After receiving a complaint call, DPW sent out the appropriate inspector to investigate the situation. A significant consequence of this inspection system was that most inspectors' knowledge was limited to only one aspect of environmental problems. In addition each specialist was responsible for all eighteen square miles of Providence. Because this was too large of an area for each inspector to cover by himself, this system made it nearly impossible to truly solve environmental problems.

About two and a half years ago, DPW's Environmental Enforcement Division underwent a major restructuring. Changes made include "the [hiring] of a new division coordinator, and new responsibilities, job descriptions, and procedures [having] been written and adopted" as well as the addition of geographic assignments to environmental inspectors and the current routine inspection system⁴. The primary goal was to become more proactive, finding violations in the community rather than waiting to hear about them. Inspectors received training in all areas of environmental specialization, making them responsible for the entire environmental code. The Department also purchased automobiles and uniforms for the inspectors which helped to give them more visibility and recognition in the City.

Perhaps most significant were the changes made to the inspection procedure itself. DPW's modified method of enforcement involves an ongoing

³ This ordinance was added to the Providence Code in 1989.

⁴ "Mayor's Vacant Land Task Force: A Summary of City Reforms In Environmental Enforcement." 1997.

inspection rotation by the department's four inspectors of all 129 assessor's plats⁵ in the City. The inspectors' visual presence was increased with the addition of marked patrol cars and uniforms. Inspectors visit one plat per day and check all areas visible from the public right-of-way – streets, sidewalks, yards, and lots – for violations of any of the listed ordinances. The rotation schedule is for a six-week period (i.e. every city block in Providence should be visited once every six weeks). Inspections usually take place all five week days and occasionally on weekends when there is a need for an area sweep. This would occur when DPW receives a request from a council person or another concerned person about the condition of a certain area. Two or three inspectors are dispatched to this area and go through it street-by-street, issuing all necessary citations.

When an inspector finds a violation on a lot, he fills out an Environmental Enforcement Action (EEA) (see Appendix A) form which includes the location of the violation (plat/lot numbers, and street address), the nature of the violation, whether a verbal warning, a warning letter, or a ticket was issued, and the inspector's badge number. The decision to issue a verbal warning, warning letter, or NOV is entirely up to the discretion of the inspector. The inspector will often give a verbal warning if someone is on the property at the time of the inspection. If the inspector decides to send a warning letter rather than a ticket, he will do a follow-up inspection within about a week and if the problem has not been rectified, he will issue an NOV.

⁵ A "plat" is a geographic division of a City, comprised of a cluster of lots used for tax assessment

After completing his inspection in the morning, the inspector returns to DPW and submits his EEAs for a title search. This is the method by which DPW identifies the owner of the property on which a violation is found⁶. The first step of the title search process is checking the tax assessor's database. However this is only a starting point as records in this database can be up to six months outdated. Thus the owner information taken from the tax assessor's database is cross referenced with the recorder of deeds records. Matching these two pieces of information can take anywhere from five minutes to four hours, depending upon the condition of the records for the given property.⁷

During the afternoon, after submitting his EEAs for title searches, the inspector either answers complaint calls – all of which are followed up within a day of the call – or returns to problem locations that he identified that morning or earlier in the week.

Once the owner has been identified, the inspector can send out a warning letter or a ticket via certified mail. This generally happens within two to three days of writing the EEA. The ticket, then is usually received by the owner within four to five days of the initial inspection. Upon receiving his/her ticket, the offender has seven days to respond, either by paying (both the penalty and the cost of remediation) or pleading not guilty. If there is no response after 14 days the fine doubles, after 28 days it triples, and after 35 days the offender is summoned to court. Because the City does not have the capacity to hear every

purposes. Plats can be of varying sizes.

⁶“Owner” is here intended to be distinguished from occupant. The owner owns the property, the resident resides on the property. The owner and the resident may be, but are not necessarily, the same.

case at trial, it offers an economic incentive to pay the ticket. Thus the court process begins with pre-trial motions in which the supervisor of the Environmental Enforcement Division at DPW, Lisa Powers, and a City solicitor, Cornelius McAuliffe, offer to reduce the original fine based on an official mitigation schedule⁸. The offender can agree to pay the mitigated fine or maintain his/her innocence and request a trial date. (See Appendix B for flow chart illustrating the inspection process.)

Since this major restructuring in 1995, the most obvious change in the City's environmental enforcement system is the addition of the environmental court calendar to the municipal court system. It meets once a week and is presided over exclusively by the Chief Justice of the Municipal Court, Judge Frank Caprio. A component of the Mayor's vacant land task force, the court was established in response to the concern that, given the municipal court's busy calendar and other focuses, environmental offenses did not receive enough attention.

The first environmental court was established in Indianapolis in 1978, and since then an estimated 60 to 70 additional courts have been founded.

⁷ Information about the title search process was provided by Lou Ricci, Assistant Director of Public Works.

⁸ At time of publication, the City has recently approved an increase in the budgets of the Department of Public Works, the Law Department, and the Municipal Court. These funds will be used to fill a total of seven new environmental enforcement positions. Once this happens, neither Lisa Powers nor Cornelius McAuliffe will be responsible for pre-trial motions. A court liaison will replace Ms. Powers and a full-time attorney will replace Mr. McAuliffe.

Providence's environmental court, however, differs from those in other cities in its emphasis on illegal dumping.⁹

The establishment of the environmental court calendar addressed the issue of the lack of attention being devoted to environmental violations. Yet this was not the system's only problem: a number of legal loopholes existed that encouraged environmentally detrimental activities. Because the City has not had the statutory authority to hold tax-title speculators responsible for the maintenance of their properties, many cases existed in which properties were owned by out-of-town speculators who let their lots fall into disrepair.

This pattern changed with the passage of the Super Lien Law in July of 1997 that "creates 'Environmental Super Liens' [whose] upgraded status allows the City to clean up blighted properties by greatly increasing the probability of collecting back the clean up costs" and the Tax Sale Realty bill which "holds speculators responsible for property maintenance"¹⁰. Because the City of Providence expects essential maintenance practices which translate to high costs for speculators, speculation which has traditionally been one of the biggest causes of poorly-kept vacant lots and abandoned properties, is no longer a good business investment. In addition, new arrest powers have been granted to the environmental court that enable Judge Caprio to issue arrest warrants for cases in which violators do not appear in court in response to a summons or in

⁹ Piorek, Erin M. "Environmental Solutions and Distinctions" in *Providence Business News*. December 22-28, 1997.

¹⁰ "Mayor's Vacant Land Task Force. . ."

situations in which an eyewitness can offer evidence linking serious environmental offenses to a suspect.

As part of the Mayor's Vacant Land Task Force, Providence also received an EPA grant to institute the Providence Environmental Strike Team (PEST) whose "mission [is] to improve environmental health and safety conditions in urban neighborhoods by raising community awareness through multi-lingual education and outreach, and by coordinating environmental enforcement efforts with city, state, and federal agencies"¹¹.

¹¹ "Mayor's Vacant Land Task Force. . ."

Information Available for this Study

My research depends primarily on four sources of information: DPW's EEA database¹², information provided by the City's Data Processing Department that is derived from the NOV database, the Tax Assessor's database, and DPW inspectors. The EEA database is an Excel file with the following fields: 1) day and month; 2) street address of violation; 3) ticket number if NOV was issued (if not, this field shows status of lot, e.g. verbal warning, warning letter, clean, etc....); 4) badge number of inspector; 5) plat number of violation; 6) lot number of violation; 7) year of violation; and 8) EEA number.

Information in the NOV database overlaps some with that in the EEA database. However the NOV database has a subset of the records that are in the EEA database: only those inspections for which a ticket is issued. In addition more information is recorded in the NOV database than in the EEA database. The NOV database has the following fields: 1) date of the inspection; 2) badge number of inspector; 3) street number; 4) date the ticket was issued; 4) time the ticket was issued; 4) type of violation; 5) location of violation (full street address); 6) name of violator (owner of property); 7) address of violator; 8) state in which violator lives; 9) zip code of violator; 10) violated ordinance; and 11) status of ticket payment. I did not have direct access to this database, but the Data Processing Department provided me with the data relevant to my study.

¹² At the time of my study, the EEA database for 1997 (the year on which I focused) is not complete. About 3700 NOV's have been entered, while the NOV databases indicates that about 5500 tickets were

The Tax Assessor's database includes fields for every piece of property in the City, that list the address of the property and the mailing address of the owner. If these addresses are the same, the property is owner occupied, if they are different, it is an absentee landlord situation^{13 14}. The applicability of this information to my study is elaborated further below.

In addition to these three sources of quantitative data, I used the inspectors as a qualitative source. Information from the inspectors was obtained through interviews with them and by accompanying the inspectors on their inspections.

issued in 1997. Clearly, this has limitations on the thoroughness of my study. However, the remaining 1900 NOV's are presumably similar in distribution to the 3700 already entered into the EEA database.

¹³ According to April Wolf, Deputy Inspector of Inspections and Standards at Code Enforcement, up to one-third of the properties that, according to the tax assessor's database, are owner occupied, may in fact be absentee landlord situations.

¹⁴ A special thanks to Patrick McRoy, Anna Thomas and members of ES192 for organizing this data.

Chapter 2
Questions to be Addressed

As explained in the last chapter, my two primary objectives are: 1) making recommendations for improvements to the City's environmental enforcement process; and 2) suggesting preventative measures that will discourage people from committing environmental offenses. To achieve these objectives, I used the previously described information sources to answer a number of questions about the current system. The questions are stated below. Each one is followed by a description of its importance and an explanation of how it was answered:

How many violations of each ordinance occurred between January and December 1997?

With the exception of the assessment of fines, the existing enforcement process treats all violations with the same degree of importance. Inspections are designed to find all violations; they do not target any specific offense. This method is practiced with the intention of finding and correcting all offenses. If, however certain violations are occurring with much greater frequency than others, it may be worthwhile to devote more attention to these offenses. Depending upon the situation, this attention may come in the form of more

frequent inspection, more stringent follow-up, or greater emphasis on public education.

The break-down by type of violation was provided by the City's Data Processing Department. These figures were easily obtained using the NOV database.

Where have the violations occurred?

As with violation types, the location of violations may also be helpful in targeting enforcement efforts. All areas of the city are currently inspected with the same frequency, and all violations are handled in the same fashion. If a disproportionate number of violations are occurring in a particular area(s), perhaps this area(s) should receive more attention. Again this attention may come in various forms.

The EEA database includes the address for which the EEA was issued. Using Maptitude™ software in conjunction with the address information in the database, a map was created that indicated all of the violations in the city of Providence. Unfortunately, because the EEA database does not include violation type, the map does not distinguish between violation types.

How many violations are to absentee landlords (as opposed to owner occupied residences)? Should the existing policy be revised?

Under current regulation, owners of property are always considered responsible for violations on their property, regardless of whether they live

where the violation occurred. This policy has been hotly contested by some absentee landlords who maintain that they cannot be responsible for certain aspects of their tenants' behavior, like garbage disposal. Tenants may not have a personal incentive to follow environmental regulations if they are not held accountable for their own activities. If indeed many violations are occurring in absentee landlord situations, perhaps this policy should be revised.

As noted, the Tax Assessor's database indicates those properties in Providence on which the owner resides, and those on which s/he does not (see footnote 13). Using this information with the address of the violations from the EEA database, the number of owner-occupied and absentee landlord violations was determined.

How many repeat offenders are there? Should repeat offenders receive different treatment?

As with parking tickets, no distinction is made between a person committing his/her first environmental offense and someone committing his/her tenth, as long as the previous tickets have been paid. Some people may not be discouraged from repeatedly taking their garbage out a few days early if they only receive periodic \$25 fines. This behavior, however, may change if the penalty for this offense increases with additional violations. Repeat violation information can also be useful in conjunction with the previous question to determine whether renting tenants repeatedly commit the same environmental offenses.

This information was found by using the EEA database to determine which properties have been issued multiple tickets.

How effective are warning letters (i.e. how many warning letters are not followed by tickets)?

Inspectors are currently under no obligation to send warning letters before issuing tickets; they are considered a courtesy¹⁵. If an inspector does choose to send a warning letter, the site is re-examined in about a week and a ticket is then issued if the problem has not been rectified. Because the ultimate goal of environmental enforcement is to change behavior, not to make money, a warning letter may be equally as effective as a ticket. Perhaps warning letters would be an even more effective tool for fostering compliance as they might not lead to the public resentment that the issuance of tickets might foster.

The EEA database indicates when warning letters have been sent. Checking how many of these warning letters were/were not followed by tickets, gives an indication of the warning letters' effectiveness.

How effective are verbal warnings?

As with warning letters, there is no formal policy for inspectors giving verbal warnings. Yet most inspectors do give verbal warnings if the violator is on his/her property at the time of the inspection. If results indicate that the

¹⁵ This system is currently being revised by DPW. The department intends to mandate the issuance of warning letters before sending tickets. Nevertheless this is still an important question to answer as results may show that warning letters have a low response rate suggesting the DPW should not move towards mandating their issuance.

response rate to verbal warnings is high (i.e. a small percentage of tickets follow from verbal warnings), this may also provide support for the potential benefit of sending warning letters.

The EEA database was used to determine how many verbal warnings were/were not followed by tickets. This comparison assesses the effectiveness of verbal warnings.

Have NOVs been reduced since the establishment of the environmental court (i.e. comparison between January-November 1996 and January-November 1997)?

One of the primary motivations for establishing the environmental court was the weight it would give to environmental enforcement; people would know that they could not get away with committing offenses that, in the past, went unenforced. The court was established in November 1996, more than a year after DPW began its existing form of proactive enforcement. Because the method of finding offenses was the same in early 1996 as it is now, comparing NOVs from these two time periods gives an indication of changes resulting from the establishment of the court.

Using the NOV database, DPW's computer staff determined the numbers of violation by type for these two time periods.

What are the strengths of the different inspectors?

DPW rotates its six-week inspection schedule about every six months. This system enables each inspector to become relatively familiar with his

inspection area while ensuring that, by switching the schedule after about six months, he is familiar with many areas of the City. While this system should help to achieve geographic consistency in the City, it does not address the question of inspector consistency. When only four inspectors are in charge of the City's environmental enforcement, serious judgment differences of just one of them can have a large impact on the City's overall enforcement results.

This question is more qualitative than the previous ones and, therefore was more difficult to answer based on raw data. A partial indication of consistency between inspectors is a comparison between the total number of EEAs issued by each inspector, with particular emphasis on the number of NOVs, verbal warnings and warning letters issued. This is not definitive, however, since a specific day on which an inspector is assigned a plat with an unusual number of violations could dramatically impact the results. Thus, accompanying them on their plat inspections was also important in identifying the strengths of the different inspectors.

Initially I intended to select plats to visit with inspectors based upon demographic similarities (e.g. income, density, race distribution); I planned to identify two pairs of demographically similar plats and accompany the appropriate inspectors on their inspections of these plats. This selection method was used for the first two accompanied inspections. However, scheduling conflicts arose when planning the final two inspections that prevented me from going on the pre-selected plats on a few different occasions. Thus, the second set of accompanied inspections did not take place on demographically similar

plats. I still feel that I obtained a clear sense of the methods of all four inspectors, each of whom seemed to practice the same basic techniques on all his plats.

Should DPW inspectors go on to the properties they are inspecting?

Though the City ordinance does not explicitly state whether or not inspectors may go on to the properties they are inspecting, on advice of legal counsel they currently do not. A search warrant may be obtained that allows inspectors to enter a given property, however this is rarely done. This may result in serious limitations in the accuracy and thoroughness of inspections. If this judgment is indeed leading to insufficient environmental inspections, and is having repercussions for Providence's sanitary conditions, the City may want to reconsider it.

This research again depended upon qualitative information. One important factor was the inspectors' feelings about this policy, which I ascertained through interviews. In addition, by accompanying the inspectors on their inspections, I got a personal sense of how much can be determined from the street.

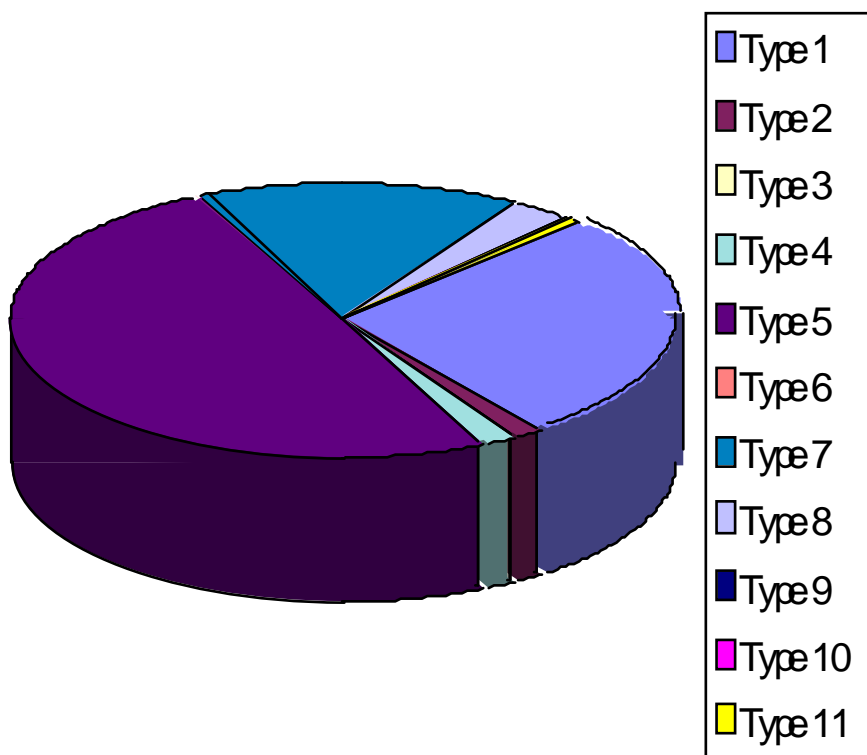
The following chapters are devoted to answering and analyzing these nine questions. The findings from each question are detailed, and conclusions reached from this research follows.

Chapter 3

How many violations of each ordinance occurred between January and December 1997?

Research and Results:

The following is a graph of the 1997 environmental violations:



Even the most superficial examination of this chart reveals the major discrepancies in numbers of violations between the different ordinances. These obvious differences are important to consider given the current system's equal inspection treatment of all offenses.

Perhaps more significant than this overall picture, are the specific numeric differences between violation types. The following table shows the number of violations associated with each type of ordinance:

Type Number	Associated Ordinance	Number of Violations
1	Early/improper storage household trash	1567
2	Early/improper storage commercial trash	86
3	Trash hauling without a license	9
4	Violation of dumpster ordinance	99
5	Littering	2813
6	Depositing of garbage into container of another	18
7	Illegal dumping of over one cubic yard	867
8	Illegal dumping of heavy litter	185
9	Violation of the recycling ordinance	3
10	Scavenging	1
11	Other	39
	Total	5687

This table illustrates significant differences between some ordinances in their associated number of violations. Violations to ordinances 1 and 5 - early or improper storage of household trash, and littering - account for more than seventy-five percent of the total 5687 violations. Conversely, ordinances 3, 6, 9, and 10 - trash hauling without a license, depositing of garbage into container of another, violation of the recycling ordinance, and scavenging - all have fewer than 20 associated violations.

Analysis and Suggestions:

The total number of littering violations - 2813 - may seem inordinately high if one's image of littering is of cans thrown out of a car window, and garbage strewn about the sidewalk. It is difficult to imagine how 2813 people could be caught in the act of committing such offenses. However, according to the Providence Code which identifies and explains the City's environmental regulations:

No person shall dump, deposit, drop, throw, discard, leave, cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of litter upon any public or private property in this City... unless:

- 1) The property has been designated by the City for the disposal of litter;
- 2) the litter is placed in a receptacle or other container intended by the owner or tenant of that property for the deposit of litter.¹⁶

Thus, included in the littering violation, and indeed the situation that comprises the majority of these offenses, is uncontained garbage.

Given this clarification, it is clear that the vast majority of environmental offenses - those for early or improper storage of household trash and for littering - are relatively minor infractions of the City's environmental regulations. According to the inspectors, these two violations overlap considerably. Technically, improper storage of household trash refers to anything that is around a garbage can. However inspectors noted that, because the penalty for littering is more than that for improper storage of household

¹⁶ Providence Code. Department of Inspection and Standards. Sec. 12-57.

garbage, in cases in which there is excessive garbage around a can they will often issue a ticket for littering.

Both of these violations are easily reducible. Vast reduction of violations for both these ordinances would not necessitate major changes in behavior from the residents of Providence; they simply require the knowledge of and adherence to the City's rules about garbage disposal.

One basic suggestion to the City is to make a concerted effort to increase public awareness and understanding of the City's ordinances. Some efforts towards these ends are already being made by the City. In conjunction with the Rhode Island School of Design, public service announcements have been/are being created for television screening. As an outreach component of the newly formed PEST mentioned in "Chapter 1," the Mayor's office has also prepared pamphlets and fliers explaining the City's environmental regulations (for an example, see Appendix C)¹⁷. This information should be distributed to all residents of the City. In addition, unlike the existing sources of information, these fliers should clearly state that if people want to avoid penalties, they must comply with the listed rules.

In addition to increasing the public's awareness of the City's environmental regulations, this type of information can include the fines associated with each violation. A clear association between an infraction to the

¹⁷ According to Luke Driver in the Mayor's Policy Office, 65,000 English versions of these fliers have already been sent and 10,000 Spanish versions have been given to community groups for hand delivery.

city's rules and an actual dollar amount of fines, may prove sufficient in persuading many people to follow the City's ordinances.

The fine system itself can also be altered to address the type break down of environmental violations. The following list shows the existing penalties associated with each ordinance:

1. Early or improper storage of household trash	\$25.00
2. Early or improper storage of commercial trash	\$50.00
3. Trash hauling without license	\$200.00
4. Violation of the dumpster ordinance	\$50.00
5. Littering	\$50.00
6. Depositing of garbage into container of another	\$50.00
7. Illegal dumping of over one cubic yard of litter	\$500.00
8. Illegal dumping of heavy litter	\$500.00
9. Violation of recycling ordinance	\$25.00
10. Scavenging	\$25.00
11. Other	\$100.00 ¹⁸

This penalty list was clearly designed to reflect the environmental significance of the different ordinances. The basic hierarchy of fines should therefore be maintained. However, a slight increase in some fines, particularly early or improper storage of household trash and littering, may help to deter people from committing these offenses.¹⁹

¹⁸ Providence Code. Department of Inspection and Standards. Sec. 12-80.

¹⁹ At the point of writing, the City of Providence is in the process of modifying the penalties. This list and these recommendations reflect the City's current formal policy.

Discussion of this question has thus far focused on the results that show particular ordinances with high numbers of violations. But my research also shows that some ordinances had very few associated violations. Fewer than 20 violations were issued in 1997 for four ordinances: trash hauling without a license, depositing of garbage into container of another, violation of the recycling ordinance, and scavenging. It is quite possible that nine violations of trash hauling without a license is representative of the actual situation. This is not likely to be a commonly committed offense, as few people would have a major incentive to commit it. Furthermore, section 12-75 of the Providence Code states that all licensed trash haulers must have proof of their permits clearly displayed. Identifying an illegal trash hauler would, then, be fairly simple and DPW inspectors are likely to catch most violators.

The low numbers of issued violations for the other three ordinances are less likely to reflect true circumstances. Depositing of trash into someone else's container is addressed in section 12-75(e) of the Providence Code: "It shall be unlawful for any person going upon the premises of another to dispose of litter while on such premises except in receptacles provided for such purposes without the consent of the owner or person in control of such receptacle." Given this explanation, it would be extremely unlikely for inspectors to find people while in the act of committing this violation.

One way to more directly address this offense is to encourage residents to report any observations of people depositing their trash into someone else's containers. In this case, the public could be encouraged to report violations by

being told that, if an inspector sees a violation that was committed by a non-resident's improper use of a garbage receptacle, he will not know who is responsible and will issue a ticket to the resident. This would provide a personal incentive for landlords to watch out for such activity.

Violation of the recycling ordinance is another offense that an inspector is unlikely to witness on his routine inspection. The City's ordinances require that "The owner or occupant of any premise or dwelling unit where recyclables shall accumulate shall store said recyclables in the state-provided special container/receptacle on said premises"²⁰. Because inspectors do not search the contents of people's garbage, they do not know if the recycling ordinance is being violated. One suggestion to the City that addresses this problem is mandating clear recycling bags. This policy which is currently practiced in Maine would make it visually obvious if non-recyclables are being placed in recycling bags²¹. By extending this to regular garbage bags as well (i.e. trash bags would also be transparent, though with a different tint), failure to put recyclables in their proper bag would also be visually obvious. In addition, landlords must be required to provide all their residents with proper recycling containers (see "Chapter 5" for elaboration of this idea).

Only one incident of scavenging was reported for 1997. According to section 12-87 of the Providence Code, "No person shall scavenge household rubbish, garbage or recyclables within the City limits." This regulation was

²⁰ Providence Code. Department of Inspection and Standards. Sec. 12-61.2(a).

²¹ Information about Maine's clear-bag recycling program was provided by Luke Driver in the Mayor's Policy Office.

initially created based upon the notion that it might cause problems, both regarding sanitation and personal privacy, to have people rummaging through the garbage of others. Yet the City has found that scavenging is a basically harmless activity that is generally practiced by poor and/or homeless people who may benefit slightly from selling products or finding food²². Thus, unlike in the two cases just discussed, stricter enforcement of the City's scavenging rules may not be a desirable goal. Various people at DPW noted that this ordinance is already only loosely enforced. I recommend that the City formally retract this regulation.

²² Information about the scavenging ordinance was also provided by Luke Driver.

Chapter 4

Where have the violations occurred?

Research and Results:

Unfortunately, because the EEA database does not include the violation types, the location of violations cannot be mapped by type. Thus the map shown in Appendix D illustrates the location of all environmental violations in Providence in 1997.

Almost all neighborhoods in Providence have some scattered violations. Clusters of violations do, however, appear in certain areas of the City. Such areas include: east Hope and Mount Hope, west Upper and Lower South Providence, west Washington Park, northwest Silver Lake, southeast Elmhurst, northwest Smith Hill, central Olneyville, central Federal Hill, and most of West End and Elmwood.

When compared with various demographic information about the City, many of these clusters follow a pattern that one might expect. A pattern of high violation areas exists around parts of the City that are in the two lowest income brackets (see Appendix E). Most of the high violation areas also exhibit high unemployment rates. However, high unemployment rates also exist in many areas of the City that do not have clusters of violations (see Appendix F), so the significance of this correlation is questionable. Nevertheless there does appear

to be general correspondence between concentrations of violations and lack of affluence in Providence. Level of affluence often correlates with race distributions in a given area (e.g. predominantly white neighborhoods are generally wealthier than predominantly non-white neighborhoods). Accordingly, a general correlation also exists between high violations and large non-white populations (see Appendix H).

Another significant pattern illustrated by the map, which may have serious enforcement implications, is the tendency for violations to occur in dense clusters along individual streets. Certain streets, such as Goddard and Grand View, have nearly constant lines of violations (see Appendix G and H for expanded maps).

Analysis and Suggestions:

This research reveals two significant trends: 1) there is an inverse relationship between an area's level of affluence and its number of environmental violations, and 2) the violations appear to cluster together in separate block groups.

The first trend is quite complicated and difficult to approach. The existence of this relationship does not necessarily suggest any causal explanation of it. Based on personal experience, one expects high income neighborhoods to be cleaner and more carefully maintained than their less-wealthy counterparts. This is likely to result from a number of factors. People with higher property values have a monetary incentive to preserve this value by

keeping their property in good condition. Owner occupancy tends to be higher in wealthy neighborhoods and people often maintain their own property better when they actually own it. Wealthy neighborhoods also generally have better education systems that teach and encourage environmentally friendly behavior. More money is invested by local or state governments in the upkeep of areas in which people with more money live. We cannot, therefore, conclude that lack of wealth *causes* violations of environmental regulations or vice versa. Yet it is important to acknowledge the coincidence of these circumstances and the social justice implications of this relationship. People with low incomes should not automatically find themselves living in areas with worse environmental conditions than other areas of the city. We must recognize that it is in the best interest of those people living in these neighborhoods to see this relationship dissolve.

While it is important to keep this general relationship in mind, as previously noted, within these larger concentrations of violations are distinct clusters on the block level. This picture fits closely with the observations of the inspectors who pointed out the sharp contrasts that often exist among blocks in the same neighborhood; one block will be filled with violations, while the next is clean and well-kept. Environmentally friendly or unfriendly behavior, then, appears to be somewhat contagious among neighbors.

A map of the violations like the one shown in Appendix D, can assist in addressing these behavioral trends. This map enables the City to identify the blocks on which many violations occur, and specifically target these hot spots

with increased enforcement efforts. Letters can be sent to owners of properties on these blocks explaining that this area has been identified as a persistent source of environmental problems and that the City is monitoring it to ensure that the problems are rectified within an allotted time period. If the situation is not improved, the City can enact a system similar to that which it used to target problem vacant lots in the summer of 1997²³, and correct the problems at the owners' expense. Periodic mapping of Providence's violations should be continued so that hot spots are continually identified and rectified.

This system is not only desirable because of its potential to target and reduce violations in the City. By extension, this overall reduction of violations will also help to eliminate the previously discussed relationship between affluence and violations as the majority of the reductions will be realized in the poorer areas of the City. That is, if the hot spots are targeted for enforcement and remediation, the environmental conditions of the less wealthy areas of Providence will be significantly improved.

²³ A concerted clean-up effort by the City of Providence began with, in conjunction with Brown University, creating a database of all the vacant lots in the city that ranked them in three levels of risk. A list of all of the high-level risk lots was published in the *Providence Journal Bulletin* with a warning to owners that if they did not clean their lots, the City would clean them at the owners' expense. This program was extremely successful; about half of the listed lots were cleaned by the owners immediately.

Chapter 5

How many violations are to absentee landlords (as opposed to owner occupied residences)? Should the existing policy be revised?

Research and Results:

The tax assessor's database lists the actual address and the mailing address for almost all properties in the City of Providence. By comparing these two fields, one can determine whether or not a residence is owner occupied (see footnote 13). By checking the status of all violations listed in the EEA database, a ratio of absentee landlord to owner-occupied situations was determined. For 1997 environmental violations in Providence, this ratio is 2345 to 989²⁴. Thus, there are almost 2.5 absentee landlord violations issued for every one owner occupied. This is close to the city-wide ratio of absentee to owner occupied residences of about three to one.

This ratio coincides with inspectors' observations. All of the inspectors noted the tendency of violations to occur in absentee landlord situations. When asked for any theories about why this would occur, one inspector said that "the numbers really speak for themselves". He explained that people who do not own the property on which they live do not have the same personal investment in it that owners have.

²⁴ Given April Wolf's speculation, the actual ratio between absentee and owner occupied residents may be even larger than 2.5 to 1.

Analysis and Suggestions:

As mentioned in “Chapter 1”, Providence’s current policy holds owners of properties responsible for all violations that occur on their property, regardless of whether the owner lives on the given property. The City now has Superior court case law supporting its policy. In the fall of 1997, Rhode Island Superior Court Judge Darrigan ruled against a landlord who was claiming that he was not responsible for his tenants’ behavior. This policy has both practical and philosophical motivations. On a practical level, identifying which resident in a multi-unit dwelling committed a violation such as early or improper storage of household garbage, would be time consuming and difficult. Philosophically, this policy represents the City’s belief that owners should have a personal investment in their property – they should care about keeping it clean.

Yet results from this question suggest the need for the City to reconsider its existing policy. Nearly 2.5 times as many violations were issued for properties on which the owner does not live. This implies that some tenants unfairly benefit from this system and take advantage of its assurance that they will not be penalized for an environmental violation. In addition, many landlords have complained about receiving tickets for their residents’ activities over which, they say, they do not have control. They argue that the person who actually violates one of Providence’s ordinances should be the person who pays the penalty for it. Some landlords say that they have spoken in the past to

tenants about problems with following the City's environmental regulations, and the tenants agree to change their behavior but do not.

Therefore, I recommend modifying this policy, which can be done without compromising the City's practical or philosophical considerations. It undeniably would be quite impractical for DPW to identify the actual offender for most environmental violations. Landlords, on the other hand, sometimes do know which of their tenants commit a violation. A formal system can be created whereby the City agrees to give landlords a certain amount of time to identify the tenant responsible for the given violation. If the landlord can offer evidence that a certain tenant committed the violation, then the tenant will be held responsible for the payment of the NOV. However if the landlord cannot identify the offender, or prove that the identified offender did indeed commit a violation, then the landlord will be held responsible for the payment. This policy could be clearly stated in all tenants leases. Landlords would also be encouraged to distribute detailed information about the City's environmental regulations to all tenants at the point that leases are signed.

This revised policy can also reflect the City's philosophical beliefs regarding the owners' responsibility to maintain their property. The current policy of holding owners responsible for all violations on their property sometimes results in an antagonistic relationship between the City and these owners. A system that enables owners to find the environmental violators would foster cooperation between the City and absentee landlords who would see that they are not being blamed for activities in which they did not

participate. Environmental protection of the City should not be seen as being unfair to its residents; this policy could help to eliminate this view.

Nevertheless, by state law owners are responsible for the upkeep of their property. Included in the proposed policy would be a requirement that all landlords provide their tenants with appropriate garbage and recycling containers. In addition, they will be encouraged to conduct their own periodic inspections of their property and to address any problems that they discover independent of DPW's inspections.

Chapter 6

How many repeat offenders are there? Should repeat offenders receive different treatment?

Research and Results:

According to the EEA database, 3727 tickets were issued in 1997. Of these tickets, 2461 were issued to a given address only once. Thus, more than one-third of the tickets (1266) occurred in repeat violation situations. The following chart shows the number of cases which occurred for each number of times a violation was repeated:

Number of times violation was repeated	Number of cases in which this occurred
2	355
3	89
4	37
5	8
6	7
7	6
8	1
9	1

These numbers themselves are significant as they indicate that repeat violations are a large factor in the City's environmental enforcement system.

Closer examination of these figures also reveals important information. Of the 355 two-time violations, 73 (about 20 percent) of them were issued within one week of each other. This may have implications in terms of the seriousness with which people regard the City's environmental ordinances (i.e. knowingly committing two violations within one week of each other suggests little regard is given for the ordinances)

These numbers may, however, indicate another phenomenon: different inspectors are unintentionally issuing tickets for the same offenses. Out of these 73 cases, 32 involved two different inspectors issuing tickets within one week of each other. By looking at the associated EEAs (which, unlike the database, describe the type of violation), I determined that 13 of the 32 cases were most likely ones in which two tickets were issued for the same violation.

Temporal patterns are important to examine for all cases of repeat violations, not only two-time repeats in which tickets were issued by different inspectors as was just described. In a total of 55 of the three-time, four-time, five-time, etc... repeat cases, the lag in between violations was between 6 and 8 weeks. This may indicate that the same violations were repeatedly identified on routine inspections. If this is true, a possible corollary is that violations are occurring at these locations even more than is indicated by the number of tickets issued, but they are only observed on routine inspections.

While some repeat violations show these 6 to 8 week spacings, many others reveal another significant spacing trend: multiple tickets were issued on the same day by the same inspector. This occurred in 36 situations. Unlike cases in which a person commits single offenses at multiple times, these situations occur when a person commits multiple offenses at a single time. Thus, these do not necessarily represent people who ignore previous tickets. It is, however, important to note the existence of some cases in which a person both commits multiple violations on the same day, and is issued tickets on multiple occasions.

Analysis and Suggestions:

Out of the 504 repeat violation cases that occurred, 355 of them were for two-time repeats. Realistically, the City cannot expect to stop all of these violators. In addition, it might be too harsh for the City to levy fines to someone after s/he has committed only one violation. Perhaps the focus should be on people receiving three or more NOVs. I suggest that after receiving three tickets within a year, a violator should be fined two times the original amount of his/her next ticket. Regardless of the previous fines, the penalty of the third ticket would double. If two more tickets are issued, the penalty of the next ticket (the sixth one) would be tripled, etc... This system will provide a significant disincentive for violators to repeat their mistakes.

All inspectors noted the desirability of maintaining friendly relationships with Providence residents. They do not seem to believe that two-time repeaters

are a serious problem, however they all noted that certain people continue to commit violations over and over again. Some of these repeaters, they said are people who do not have a strong personal investment in their property and ignore their citations until summoned to court. They also explained that differences in cultural backgrounds sometimes translate to differences in sanitary upkeep. However cultural differences are not the source of the serious repeaters.

This system would be extremely unfair if, as is suggested by the results, some inspectors are mistakenly issuing NOVs for the same offense within a few days of each other. Presumably this usually occurs when one inspector identifies an offense on his routine inspection, and another sees it by chance on a plat to which he is not assigned on the given day. Because both of these tickets would be recorded in the EEA database (which, for this to be successful, must be constantly updated), a person would not have truly committed three offenses at the point that his/her penalty is doubled.

It is important for inspectors to be constantly aware of environmental violations, rather than only reporting a violation when he sees it on the plat to which he is assigned. I do not, therefore suggest that inspectors only report violations found on the plat to which he is assigned. A simple solution to this problem of multiple tickets being issued for the same violation does exist: before issuing an NOV for a plat to which he is not assigned, the inspector always checks the EEA database to see whether a ticket has already been issued for this violation. In addition, this inspector should check the plat rotation

schedule to see if this plat will be routinely-inspected within the week; if it is due for an inspection, the non-assigned inspector should tell the assigned inspector that he has issued an NOV for the given violation.

Implementation of these suggestions would necessitate making very few changes to the existing system. A different solution to the problem of double-ticketing that would require a bit more effort is the implementation of a real-time system. The four inspectors would carry hand-held computers, similar to those used by police to issue parking tickets, on their inspections. As an inspector finds a violation, he would enter the EEA information into his computer. When he returns to DPW, at the end of his inspection, each inspector would transfer the data from his personal computer into the department's central database. This system would significantly simplify the data processing that takes place at the department by eliminating the need for the transfer of EEA hard copies into the database; in fact, it would entirely eliminate the need for EEA hard copies. This would mean that all information on the EEAs would be included in the database. A real-time system has many more advantages and applicabilities for DPW which will be discussed throughout this study.

While the circumstances just discussed involve inspectors identifying violations independent of their routine inspections, many violations are undoubtedly missed during the five weeks and six days of the rotation schedule when a given property is not inspected. The frequently exhibited temporal pattern of six to eight week spacing between repeat violations supports this theory. It suggests that an inspector is finding violations on a given lot every

time he conducts his routine inspection. Also suggested by this pattern, then, is that violations are occurring during the times in between the routine inspections, but are going unnoticed and unrecorded. Repeat violators may have learned that most of the time their violations go unnoticed.

It is important to note that this does *not* imply a deficiency in the inspectors or in the system of a six-week rotation. It only implies that some violations may not be caught and that other means of identifying them should be explored. DPW can encourage people to make complaint calls. The department promptly replies to all complaint calls: inspectors always respond to complaints within the day that the call is made, often within the hour. DPW should make more public outreach attempts to inform the public about this efficient system such as those mentioned in “Chapter 3,”²⁵ and can take more advantage of the complaint system’s potential to help the department find violations. Creating a phone line that answers only environmental complaints might also encourage people to report problems.

As previously mentioned, not only are the six to eight week spacings between violations important to consider, but so too are the much closer gaps in time: those tickets that are issued by the same inspector on the same day. Particularly significant are situations in which multiple violations are identified on the same day, and additional violations are found at a later time. The City could consider enabling DPW to issue one ticket with a large penalty rather than several tickets with small penalties which might have a greater impact on the

violator and make him/her more likely to change his/her behavior permanently.

²⁵ Included in the existing fliers is the phone number, 454-PEST, that city residents can call to report any environmental violations.

Chapter 7

How effective are warning letters (i.e. how many warning letters are not followed by tickets)?

Research and Results:

Overall, the response rate to warning letters is quite high. The following chart shows what, if anything, followed the issuance of a warning letter:

Condition	Number of Cases
Warning letter followed by nothing	191
Warning letter followed by 1 ticket	34
Warning letter followed by 2 tickets	18
Warning letter followed by 3 tickets	6
Warning letter followed by 4 tickets	6
Warning letter followed by 5 tickets	0
Warning letter followed by 6 tickets	3
Other (Warning letter followed by some combination of ticket, verbal warning, or other warning letters)	15
Total cases involving warning letters	273

For 191 out of the 273 cases in which warning letters were issued, the letter sufficed in getting the violator to correct the problem.

Responses to warning letters were not, however, universal. Excluding the 15 "Other" cases, in 67 situations, the warning letter was followed by one or

more tickets. Out of these 67 cases, in more than half - 35 - of them a ticket was issued within two weeks of the warning letter, which suggests that it was for the same violation for which the warning letter was issued. Correspondingly, this suggests that in the other 32 cases, the warning letter was sufficient in convincing the violator to remediate the immediate problem, but did not have a significant long-term effect on behavior (i.e. another violation was committed later in the year).

Particularly noteworthy is the fact that 33 of the 67 cases in which tickets were issued after warning letters, multiple tickets were subsequently issued. This suggests that the deterring power of warning letters may have a limited period of impact.

Analysis and Suggestions:

This question is especially important to consider because of its relevance to current discussion at DPW. The department plans to mandate the issuance of warning letters before the issuance of a ticket. Data that evaluate the effectiveness of warning letters may suggest whether this is a productive use of time and energy for DPW. These results seem to support DPW's decision: if 70 percent of violations can be corrected with only a warning letter, then always sending warning letters before sending NOVs is a good idea.

However, deeper analysis of these results complicates this picture. In about half of the 67 cases in which tickets were issued after a warning letter was sent, this happened within two weeks. Given that warning letters are received

within four or five days of the inspection, this suggests that in about 13 percent of the total instances the warnings had no effect. Additionally, in another 13 percent of the total cases (the other half of the 67 cases) the warning letter appears to have had only an immediate, as opposed to a lasting, effect. Another significant finding is that in about half of the 67 cases, warning letters were followed by more than one ticket. This suggests that in these 33 cases the warning letter had, at most, a minimal effect.

Despite these specific situations, the results do support DPW's decision. The effectiveness of this policy can be enhanced by using it in conjunction with changes in the repeat-violators' policy. Included in the warning letters should be a detailed description of the penalty increase that will occur with additional violations. (If warning letters are always sent, DPW may want to consider changing the previous recommendation of allowing two penalties before increasing the penalty, to only permitting one as the warning letter would, in effect, act as the first ticket). Violators are likely to take the warnings – and the violations – more seriously if they know that they are at risk of paying large penalties.

In addition to a clear explanation of the penalty policy, the warning letters should state that only one warning letter will be sent to a violator; repeat violators will not receive a warning letter before a ticket for each violation. This is an important amendment for the department to make. Otherwise repeat violators may start to take advantage of the department's courtesy of sending a warning letter. Again, a real-time system will ensure that the department's

records are entirely up-to-date which will allow for a simple check to see whether a warning letter has been issued.

Chapter 8

How effective are verbal warnings?

Research and Results:

Verbal warnings appear to have an even stronger effect than warning letters. A total of 142 verbal warnings were given. In 121 of these cases, no tickets were issued at any point in the year before or after the verbal warning. Moreover, there were 15 instances in which one or more tickets were issued prior to the verbal warning, but no tickets were issued afterwards. Unlike warning letter cases in which nearly 25 percent of the warnings were followed by tickets at some point in the year, in only four situations were tickets issued after a verbal warning was given (in the remaining two cases, a warning letter was followed by a verbal warning).

Analysis and Suggestions:

As with warning letters, it is entirely at the discretion of the inspector whether he decides to give a verbal warning. (To my knowledge, this policy is not being reconsidered as is the warning letter policy.) In general, an inspector will give verbal warnings if he sees someone on the property on which he has identified an environmental violation. Exceptions to this rule do exist: sometimes inspectors do see or talk to a person on the violated property but

decide not to give a verbal warning. This may happen if the person is uncooperative. For instance, one inspector who recounted a situation in which a violator refused to stop what he was doing inside to go outside and talk to this inspector. An inspector might also decide against giving a verbal warning if he has previous experience with this violator that suggests s/he will not cooperate.

This research illustrates an even greater response rate to verbal warnings than warning letters. Of the 142 cases in which verbal warnings were given, only two resulted in the issuance of tickets.

These numbers suggest the desirability for DPW to place a greater emphasis on verbal warnings. Clearly certain situations, such as those described above involving uncooperative residents, exist in which an inspector has good reason not to offer a verbal warning. Yet many situations may also exist in which a verbal warning would suffice in correcting an offense, but the offender is not immediately apparent, so a verbal warning is not given. Greater effort can be made by the inspectors to offer verbal warnings. An inspectors cannot always be expected to find a violator and give him/her a warning. He can, however, knock on doors to see if someone is home to whom he can give a verbal warning. In addition, he can be conscious of offering verbal warnings whenever possible. For example, if a resident peaks out of the window during an inspection, rather than ignoring him/her as may sometimes happen now, the inspector can make sure to give a verbal warning.

Advantages of making greater use of the verbal warning option are two-fold: it would both cut down on paper work for the department, and foster

cooperation between the City and its residents. Perhaps one reason for the effectiveness of verbal warnings is that people see the warnings as a favor given to them by DPW. Feeling that they have been granted a favor, people are likely to cooperate with the City and change their behavior both at that time and in the future. In addition, personal contact between an inspector and a violator is likely to have a greater impact on this offender than a piece of paper that arrives in the mail.

Chapter 9

Have NOVs been reduced since the establishment of the environmental court (i.e. comparison between January-November 1996 and January-November 1997)?

Research and Results:

As previously noted, a comparison between January to November of 1996 and 1997 should give an indication of whether the environmental court itself acts as a preventative measure for environmental violations. The following chart shows the number of violations by type for these two time periods (this information is from City Hall's NOV database):

Type Number	Associated Ordinance	Jan-Nov 1996	Jan-Nov 1997	Difference (1997-1996)
1	Early/improper storage household trash	1871	1504	-367
2	Early/improper storage comm. trash	78	85	7
3	Trash hauling without license	7	9	2
4	Violation of dumpster ord.	74	92	18
5	Littering	134	2682	2548
6	Depositing of trash into container of another	8	17	9
7	Illegal dumping over 1 cubic yard	147	864	717
8	Illegal dumping of heavy litter	10	160	150

9	Violation of recycling ord.	0	3	3
10	Scavenging	0	1	1
11	Other	63	34	-29

These results show the clear trend towards an *increase* in violations after the establishment of the court. Particularly noteworthy are the differences in numbers of violations between 1996 and 1997 for littering, illegal dumping of over one cubic yard, and illegal dumping of heavy litter (all are in bold-face in the last column). All other violation types remained relatively stable during the two-year period.

Clearly there is *not* a correlation between the establishment of the environmental court and a decrease in numbers of violations; there is actually an inverse relationship between the court's establishment and a decrease in violations. However, it is important to keep in mind that neither a direct or indirect correlation necessarily prove causation.

Analysis and Suggestions:

As discussed in the first chapter, this question was originally formulated to test whether the environmental court itself has functioned as a preventative measure for environmental offenses. Are people taking the City's environmental enforcement more seriously because they know they can be taken to court and see that they cannot avoid paying fines for environmental violations? Rather than to provide ideas for changes to be made in Providence's environmental enforcement system, this question was meant to act as an

objective measurement of one aspect of the environmental court calendar: its dissuasive abilities.

At first glance, the results from this question seem puzzling: the exhibited trend is exactly opposite the original hypothesis. From January to November of 1996 there were 2392 NOVs issued, while from January to November of 1997 there were 5451. Thus, in the post-court establishment period more than twice as many tickets were issued than in the pre-court establishment period.

Two important factors, however must be considered when analyzing these results. First, the experimental period for the data relevant to this question is extremely small. Because the restructuring of the environmental enforcement system only happened one year before the establishment of the specialized court, and because only one year has elapsed since its establishment, we are limited to a year of data on either side of the court establishment. The small size of the sample size must be considered when evaluating how conclusive these results are.

The second, and probably more significant, consideration is that the increase in NOVs issued in 1997 most likely indicates an improvement in the efficiency of the City's environmental enforcement system. The dramatic changes made to DPW's enforcement system in 1995 could not be implemented overnight. Enacting a major overhaul such as this requires patience and flexibility. Similarly, results are not seen instantaneously. Thus the more than two-fold increase in NOVs issued in 1997 probably indicates a greater

realization of results than occurred during the previous year. In addition, the establishment of the environmental court may result in environmental enforcement itself being taken more seriously by the City in general and DPW in particular. This could translate to more citations being issued by the inspectors.

Close analysis of these results shows that this overall increase is primarily the result of major increases in NOVs issued for three ordinances: littering, illegal dumping of over one cubic yard, and illegal dumping of heavy litter. Violations of these three regulations accounted for over 3700 of the total 5451 tickets issued in 1997. Conversely they only comprised 291 of the 2392 tickets issued in 1996. While they were not sure why such a dramatic increase of littering citations occurred from 1996 to 1997, DPW inspectors thought that littering citation increases in general may be the result of the inspectors' discretion in cases in which they see excessive amounts of uncontained garbage. As opposed to the uncontained garbage penalty of \$25, the littering penalty is \$50 which the inspectors sometimes believe is a more appropriate penalty for large amounts of garbage.

As mentioned in "Chapter 1," Providence is not the only city with an environmental court calendar. Yet it is unique in its emphasis on illegal dumping. Thus, while the increase in overall violations, especially those for illegal dumping of over one cubic yard, does not suggest that the court itself has acted to discourage these environmental violations, it may indicate that the system is doing what it intended to do: devote more attention to Providence's

environmental enforcement in general, and place a particular emphasis on illegal dumping in the City.

Chapter 10

What are the strengths of the different inspectors?

Research and Results:

This question involves analysis on both a quantitative and qualitative level. Quantitatively, the activities of the different inspectors can be compared by examining their corresponding EEAs. The following chart shows how many warning letters, verbal warnings, NOVs, and total EEAs (which includes these three categories) were issued by each inspector in 1997²⁶:

Inspector Number	Warning letters	Verbal Warnings	NOVs	Total EEAs
1	22	11	17	51
2	7	1	270	304
3	54	59	789	1171
4	189	51	1026	1785
5	0	0	31	33
6	0	0	57	61
7	2	0	40	47
8	21	6	1081	1393
9	0	1	177	468
10	0	25	184	516
11	0	0	16	25

Although there are always four inspectors at any given time, as this chart shows, there were more than 11 inspectors (I did not include inspectors who only worked a couple days) who worked at some point throughout the year.

²⁶ To protect the inspectors' confidentiality, the inspector numbers listed are *not* the inspectors' badge numbers.

The amount of time that each inspector worked is, therefore a significant component in comparing the activities of the various inspectors that this chart does not demonstrate.

The following chart that shows the weekly averages of the inspectors (total/number of weeks worked) is more meaningful. This chart only includes inspectors who worked for more than 10 weeks of the year, because results from a shorter period of time could get obscured by a few days of unusual circumstances:

Inspector Number	Warning letters	Verbal Warnings	NOVs	Total EEAs
3	1	1	16	24
4	5	1	29	50
5	0	0	1	1
6	0	0	3	3
8	1	0	39	50
9	0	0	16	43
10	0	1	9	27

This chart clearly indicates that major differences exist in the approaches taken by the different inspectors. With the exception of inspector #4, none of the inspectors appear to issue many warning letters. The same is true of verbal warnings. Significant differences do exist, however, between the number of NOVs and the total number of EEAs issued by each inspector.

These results, which suggest that the inspectors have different enforcement styles, correspond with my findings from the more qualitative component of this study: observation of/conversation with the inspectors during their routine inspections. One inspector explained that he fills out an

EEA, and usually issues an NOV, for almost every problem that he encounters. He believes that one person's bad behavior can have negative effects on the whole neighborhood either by creating new problems such as rodent infestation, or by influencing neighbors who then begin to commit their own environmental violations. This theory is supported by the results discussed in "Chapter 4": the map of the violations' locations reveals a clear pattern of block-wide behavior trends. This inspector's approach to discouraging such behavior is the issuance of warnings and tickets.

At the other end of the enforcement extreme is one of the other inspectors who is a self-described "project man." Rather than automatically writing tickets whenever he sees a violation, this inspector attempts to get to the origin of the problem. He described one inspection in which he organized an impromptu neighborhood cleanup. After noting violations on a piece of property that had been a long-standing source of problems, instead of issuing another ticket that he thought was not likely to have a long-term effect, he got the owners to come outside and actually clean up their mess. He said that the whole neighborhood got involved and everyone, including himself, helped remediate the problem. This type of effort, in which a problem is identified and corrected is, for this inspector, the best method for the City's environmental enforcement system. Yet it must be acknowledged that this is addressing remediation, rather than enforcement, of environmental violations.

In between these two extremes are approaches, practiced by all four of the current inspectors, that involve flexibility and diplomacy. The inspectors

have in common a belief that the City must work *with* , not *against*, the public. One inspector explained the importance of using discretion: if a person seems to be willing to cooperate and says s/he will take care of a given violation, then this person should be given a chance to prove this is true and should not be issued a ticket on the spot. On the other hand, if a person is clearly unwilling to cooperate, then it is probably not worthwhile for the inspector to try negotiating.

Analysis and Suggestions:

As with many professions, evaluating the performance of Providence's environmental inspectors is difficult. No single standard of performance exists. While the number of tickets issued may initially seem to provide such a measure, this figure does not reflect achievements such as the neighborhood cleanup described previously. Moreover, as noted in Going by the Book: The Problem of Regulatory Unreasonableness, a "rise in citations might reflect only greater legalism or ignorance of mitigating circumstances"²⁷ In other words, a high number of issued violations may simply reflect an inspector's lack of flexibility.

The primary difference between their approaches to environmental enforcement is the inspectors' emphasis on problem solving versus ticket issuance. All of the inspectors issued some tickets during the year, but their weekly averages varied from one to 50. The inspector whose average was one ticket per week may have made other significant achievements not reflected by

this number. Nevertheless, he is likely to have encountered more than one clear violation per week in the five plats inspected during this time, and in that case would not have performed exhaustive inspections.

One explanation for the large discrepancies among inspectors is the absence of a formal set of criteria for warning/ticket issuance. Because this is not an exact science and some violations are not easily categorized, a certain level of inspector discretion is necessary in this system. However, establishing a basic code that sets minimum parameters for issuing warnings and tickets would help to achieve a necessary level of standardization. This code must still allow for the use of discretion among the inspectors – they all seem to recognize the importance of working with the City’s residents. Yet it will aid in preventing people from taking advantage of the inspectors’ flexibility.

Establishing a basic code for environmental enforcement would provide a solution to the problem of inspectors with particularly low numbers of citations; it would not address the issue of too many tickets being issued. In certain situations, a greater emphasis on problem-solving is appropriate. On one inspection, the inspector noticed a violation on a property that he cited many previous times. Rather than issuing more tickets, which were clearly not having a significant long-term effect on this violator’s behavior, he found the offender and made him promise to haul away the appliances and litter that was on the sidewalk that very day. A guarantee of actual action was, in this situation, more effective than a payment of a penalty.

²⁷ Bardach, Eugene and Kagan, Robert. “Managing the Regulatory Agency” in Going by the Book: The

Problem-solving techniques like this can be incorporated into DPW's formal enforcement strategy. Included in the basic code should be a description of situations in which a project-oriented approach is appropriate. In addition, on a weekly or bi-weekly basis, one day can be designated as a "project day" on which the inspectors would try to achieve projects such as a neighborhood or individual cleanup. An inspector could choose to return to a previously-identified problem area that he believes needs extra attention, or he could find a new problem that merits more time.

All of the inspectors can learn more directly from each other than they do now by simply sharing the same office space. One component of this learning process is the combination of the inspectors' different strengths. During one rotation period, every inspector should accompany each of the other inspectors on his inspection. Though the inspectors seem to have a general sense of the other inspectors' techniques, they could benefit from seeing these strategies first hand. It would not be necessary to have these observation days for every rotation period, particularly because DPW inspectors tend to stay at the department for a long time, but it would be helpful initially and when new inspectors come to the department.

Chapter 11

Should DPW inspectors go on to the properties they are inspecting?

Research and Results:

This analysis is based solely on qualitative sources: the inspectors' attitudes about the policy, and my own observations of the inspectors' ability to conduct their inspections without entering the property. All four of the current inspectors noted the potential dangers of going on to properties that they are inspecting. Some of them mentioned specific incidents in the past in which they have been physically threatened by hostile violators. In addition, none of the inspectors seemed to believe that entering the inspected property would have a large impact on the thoroughness of their inspections, although one inspector did say that going on to property would "increase effectiveness by maybe 10 percent".

My own observations of the inspections coincided with the opinions expressed by the inspectors. Usually the inspectors could get a good look at the properties from the street. In addition, each inspector noted that when he believes he cannot get a complete look at a violation or a potential violation, the inspector often asks a neighbor if he can look at the problem from his/her property. Neighbors are generally quite cooperative. A couple of the inspectors also mentioned that if they believe it is necessary to enter a given property, they

will often do so with a police escort. None of the inspectors explained the need to obtain a search warrant, even with a police escort, to enter a property.

Analysis and Suggestions:

This appears to be an easy question to answer: in order to conduct the most thorough environmental inspection possible, of course inspectors should enter the properties they are inspecting. The exhaustiveness of inspections must be compromised if there is a limitation — entrance on to property — imposed on inspectors. However, research into this question reveals its complexity and shows that it is not as easy to answer as it initially seems to be.

Inspectors explained that safety plays a role in this issue. The inspector is sometimes approached by a hostile resident if he enters his/her property. Because abandoned properties are common locations for both crime and environmental violations, they may pose a particular threat to the DPW inspectors. In addition, one inspector recounted confrontations with dogs. This is difficult to completely avoid given the outdoor nature of the inspectors' jobs. However, dogs are likely to be a larger factor if the inspectors enter private properties on which these dogs live.

These danger issues may not be insurmountable. The City's housing inspectors enter properties they are inspecting; the housing department could advise DPW on how to address questions of inspector safety. Changing DPW's system, however, is only worthwhile if it is not currently accomplishing its goal of conducting thorough environmental inspections. All of the inspectors believe

that the current approach allows for thorough inspections. The inspectors also noted that, if they do feel that they need a better look than they can get from the sidewalk, they often ask neighbors if they can enter their property for a closer view and neighbors are generally quite cooperative. Currently, all violations are videotaped, so documented proof of the violations does exist.

A couple inspectors mentioned another method they sometimes use to obtain a closer view than they can get from the sidewalk: asking a police officer to escort them. As mentioned, none of them explained that there is still a need to obtain a search warrant when entering a property with a police person. Failure to mention this may be a product of the limited use of the search warrant policy. DPW inspectors should be encouraged to obtain a search warrant and enter a property with a police escort in all situations in which they believe their inspection will be enhanced by entering the property.

One component of PEST, described in "Chapter 1", is a partnership between the City's various municipal departments. DPW and the Providence police department already have a strong working relationship. This partnership can be formalized: direct lines of communication between inspectors and police officers (e.g. walkie-talkies or radios) can be established.

Chapter 12
General Recommendations

The analysis of the questions explained in the previous nine chapters is intended to provide the City in general, and DPW in particular, with helpful suggestions for enhancing an already successful system. My research focused on nine specific areas of Providence's environmental enforcement system and the recommendations offered thus far correspond to these individual areas.

Analysis of these questions also lead to some important, though unanticipated, findings that are more general to Providence's environmental enforcement system. Adherence to the basic six-week rotation schedule is, overall, quite consistent. On occasion, however, situations arise that necessitate cancellation of at least one of the inspector's daily assignment. Extremely bad weather might cause a cancellation of all four of the inspectors' routes; an illness could mean that one inspector missed his plat assignment.

Though these types of situations are inevitable, and will clearly result in the delay of an inspection, they need not cause its cancellation. One inspector told me that if inspection of a plat that is known to be problematic is canceled for the day on which it was originally scheduled, the inspector who was assigned to this plat will often go back to it on another day. Yet this generally will not happen unless it is a plat that frequently has violations. The need to

delay an inspection does not occur often, but when it does inspectors should use an afternoon (during which they are not on inspections) within the week of the plat's original assignment to conduct a routine inspection.

Another change that is likely to improve the efficiency of the City's environmental enforcement system may require a bigger commitment of time and effort. Currently, all warnings are followed-up within about two week. If the initial problem has been rectified, no ticket is issued. If the problem is still there, a ticket is issued. The same follow-up does not occur for the tickets themselves. Once again, implementing a real-time system would make this feasible. A person could pay the assigned penalty, but leave his/her property in its unremediated condition. Presumably, receiving and paying a penalty is a big enough incentive for correcting whatever situation brought about the penalty. However, some people may believe that if they are fined once, they will not be fined again for the same offense and will not correct the problem. A routine follow-up for tickets, similar to the one already done for both warning letters and verbal warnings, would address this problem. Again, inspectors could use the afternoons when they have finished their inspections to conduct these follow-ups.

These suggestions require additional responsibilities being assigned to the inspectors. Some improvements can be made, however, without adding new activities to the inspectors' schedules. A great deal of important information for studies such as this exists in paper, but not electronic, form at

DPW. Some valuable components of the EEA forms such as the type of violation, and the owner's address are not entered into the database.

Inclusion of all available information in the EEA database would enable a more extensive analysis than what is now possible. The ease of maintaining a current database is one of the strongest arguments for implementation of a real-time system. For example, if the violation types were included in the database, a map could easily be created illustrating the locations of violations for each type of violation. This would be useful information for the department to have, as it might suggest that different areas of the city could benefit from different emphases in enforcement efforts. Enforcement could always be focused at the areas of the city most in need of improvement. Not only should this information be available in the database, but the database itself must be available in a frequently updated form. Many of the offered recommendations, such as those for repeat offenders and warning letters, depend upon access to current and accurate records.

While the recommendations offered thus far involve modifications to the enforcement system within DPW, some changes must be made outside of the department. One suggestion is that a greater emphasis be placed on education efforts in the city. Many violations may be the result of a lack of knowledge of Providence's environmental regulations. All residents of the city should receive a clearly-stated description of the city's environmental ordinances that includes information about the associated penalties. This information should be

available in all commonly spoken languages in the City²⁸. Landlords should be encouraged to distribute this information to all new tenants.

Education efforts must be made on a more general level as well. One inspector told me that the biggest obstacle to environmental enforcement is lack of education. He maintains that public education must be targeted at children who represent the future of the city, and often serve as the primary translator in foreign households. Environmental education is beginning to play an important role in the general curriculum of Providence schools. These education efforts should include the dissemination of information about the city's environmental ordinances.

²⁸ These languages include, but are not limited to, English, Spanish, Portuguese, and Hmong (the primary language spoken by Cambodians).

Chapter 13

Conclusion

As initially stated, the ultimate objective of both this study and the City is the reduction of environmental violations in Providence. Achieving this goal involves both improving the efficiency of the current system and discouraging people from committing violations in the future. The study that has been described was designed to address these two issues.

Improving Current System

Providence's environmental enforcement system has made significant strides in the last few years. The City's recent focus on its environmental problems has resulted in legislative changes and the establishment of the environmental court calendar. Since DPW's restructuring in 1995, the inspection system has become proactive and exhaustive. Enforcement activity has increased so much that, according to the *Providence Journal*, "the City is planning to expand its Municipal Court to keep up with the growing flow of tickets"²⁹. Planned changes include the temporary expansion of the environmental court to five days per week and the approved increases to its budget (see "Chapter 1"). Both City Hall and DPW are proud of the

achievements that have been made to Providence's environmental enforcement system.

These achievements deserve recognition from City officials and residents alike. Without losing sight of the progress that has been made, we can also look at how to make additional improvements. The suggestions presented in the previous chapter serve as ideas for enhancing the current system. Some recommendations such as having inspectors check to see if a ticket was already issued by another inspector before issuing a ticket for a property that is not on his assigned plat, require little effort to implement. Others, such as modifying the absentee landlord policy, require more. Yet all suggestions can be implemented within the existing framework.

²⁹ Chivers, C.J. "City's crackdown on garbage leads to backup at court" in the *Providence Journal Bulletin*. March 21, 1998.

Discouraging People from Committing Violations

Clearly, the City wants its enforcement system to run as efficiently as possible. Ultimately, we would like this system to be running efficiently while issuing few tickets, because people would not be committing violations at all. Thus, the second component of reducing environmental violations in Providence is discouraging people from committing these offenses. Total elimination of environmental violations is not a realistic goal. Certain offenders will continue to violate the City's environmental ordinances regardless of either their understanding of the regulations or the consequences of disobeying them. The most viable way to discourage this "bad apples" is by increasing sanctions (see "Chapter 6").

However, not all offenders violate the City's ordinances so consciously. Some people are simply not aware of Providence's environmental regulations and violate them unknowingly. These people may only need clearly stated information describing the relevant rules in order to modify their behavior. Other residents have a general understanding of the City's environmental rules but are not sufficiently discouraged from violating them by the penalties they receive. Again, a fine schedule that increases with additional violations may be sufficient in encouraging these people to obey the City's ordinances.

Future Direction

This study presents a clear picture of certain aspects of Providence's environmental enforcement system. It is not, however, a full picture. Some questions, such as the one concerning the attributes of the different inspectors, would benefit from more observation time. In addition, more questions merit examination. As previously mentioned, violation types and locations could be examined together. Repeat violators could also be compared with types of violations if all data from the EEAs is entered into the database. In addition, the department could have its own record of absentee versus owner-occupied residences³⁰. Improvement of the EEA database would enable many of these comparisons that cannot currently be made.

Not only should new questions be answered, but the questions already examined in this study should continue to be tracked over time. If DPW does carry out its plan to mandate the issuance of warning letters, it will be important to continue to measure the response rate to the letters. Demographic trends in violations such as types and locations are also important to track over time. If patterns begin to change, then enforcement efforts may need to change as well.

³⁰ Another component of the recently approved budget increase to the Department of Public Works is the hiring of a "Title Examiner" who will work in the Recorder of Deeds office to create a record of ownership that will be updated on a daily basis.

Works Cited

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Appendix A

EEA Form

ENVIRONMENTAL ENFORCEMENT ACTION

DATE _____ TIME _____ N° 2700

EEA# _____

PLAT INSPECT _____ COMPLAINT _____

PROBLEM ADDRESS _____

LISTED OWNER _____

LISTED ADDRESS _____

PLAT _____ LOT _____ BOOK _____ PAGE _____

GARBAGE ___ RODENTS ___ RECYCLE ___ DUMPSTER ___ OTHER ___

BADGE _____ DATE GIVEN _____

VIOLATION ISSUED YES ___ NO ___ TICKET # _____ VIOLATION ___

DWL _____ RWL _____ RULES _____ EMPTY LOT _____

VIDEO TAKEN YES _____ NO _____

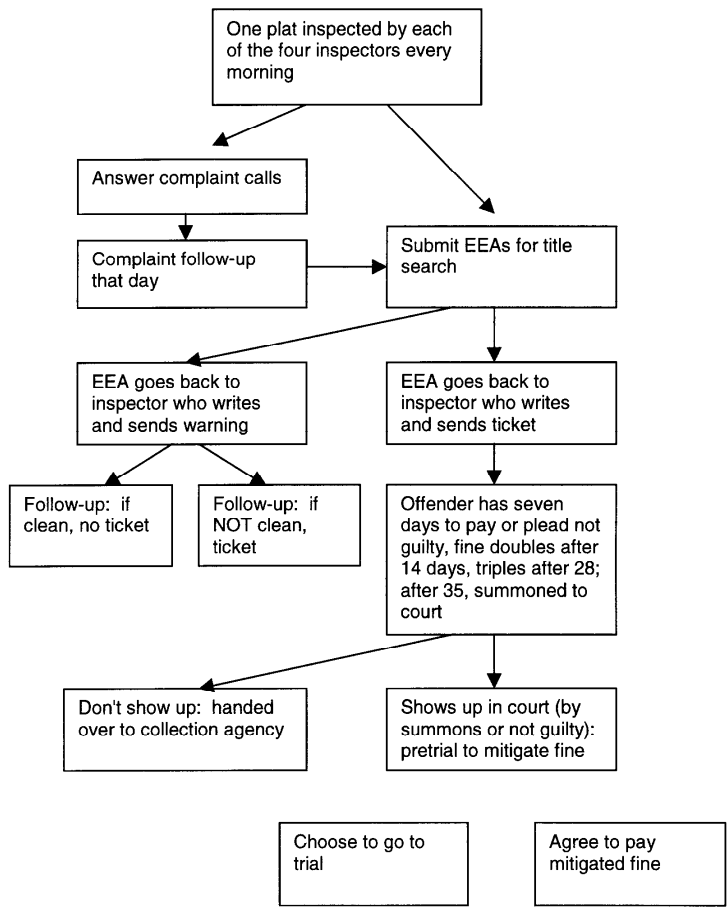
TICKET AMOUNT _____ DATE TICKET MAILED _____

CERTIFIED # _____ CERTIFIED RETURNED _____

INSPECTORS COMMENTS

Appendix B

Flow Chart of Environmental Enforcement Organization



Appendix C

PSA Example

Help Mayor Cianci

Win the City's War on Grime



For clean streets and a healthy neighborhood, follow these simple environmental rules and regulations. If you see a violation, be a good citizen, call 941-DIRT and report it. We need your help today and every day to win the war on grime!

Use only animal-proof garbage can with lid

Plastic garbage bags are easy targets for rats and dogs. All garbage and trash must be kept in water-tight, animal-proof containers to prevent unsanitary conditions. Residents who violate this must pay a \$50 fine for a City-approved trash container. This same container can be purchased for a limited time for \$31. To fight grime, get a good can and "put a lid on it."



Take large items to new Drop & Dump Center

Residents may place at curbside only one large item per week in addition to trash containers. Additional items may be discarded at the City's FREE Drop & Dump Center at 152 Terminal Road off Allens Avenue, Monday through Friday from 8:00am to 2:30pm and Saturday from 6:00am to 2:00pm. No load larger than a 3/4 ton pickup will be accepted. Proof of Providence residency is required.



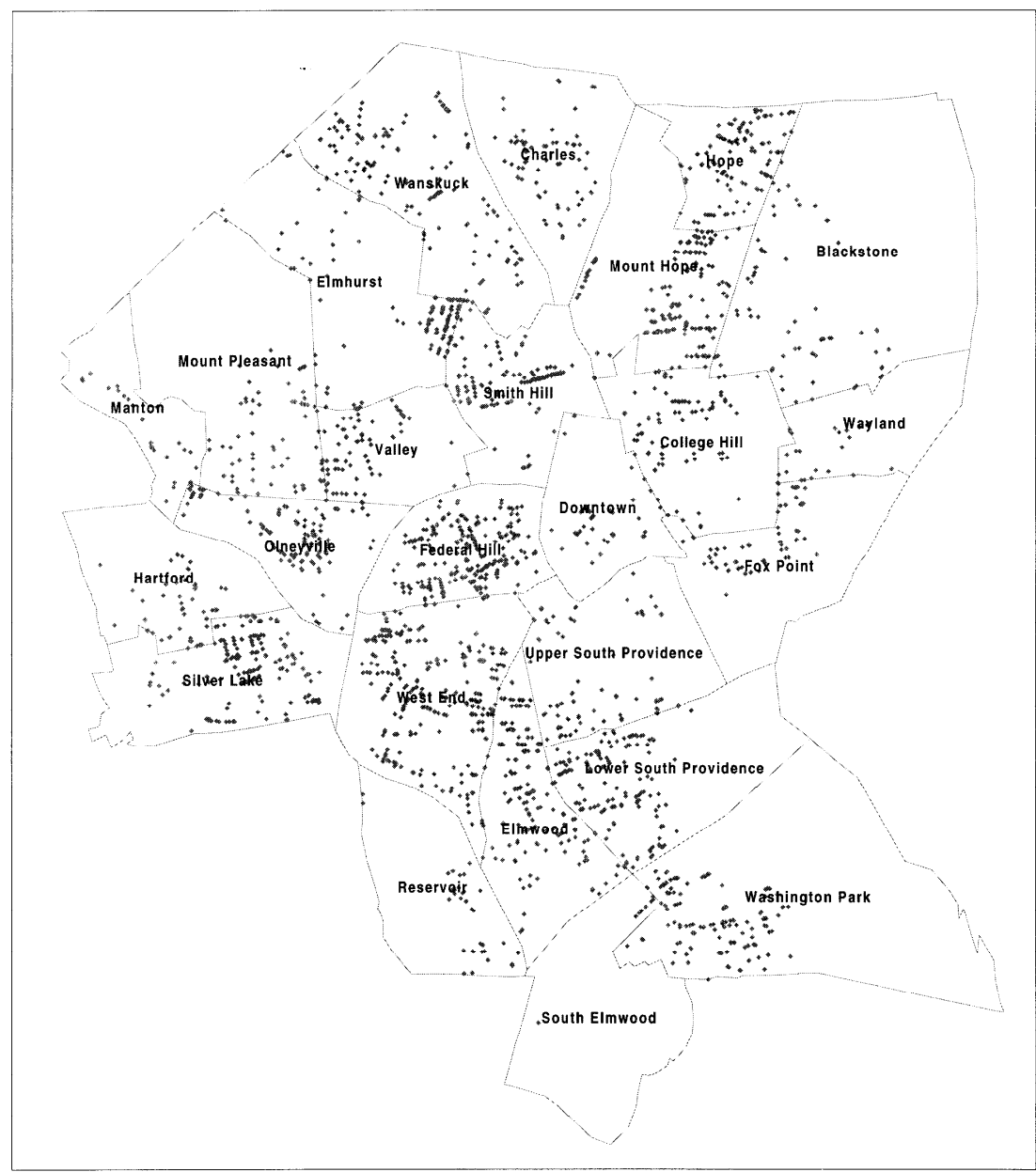
Keep your curbside clean to keep the pests away

Containers must be removed from the curbside and away from street view on the same day as pickup. Spillage from containers must also be cleaned up. A clean street and curbside will mean fewer pests and scavengers. It will also improve the appearance of the neighborhoods.

Be a Grime Reporter
Call 941-DIRT

Appendix D

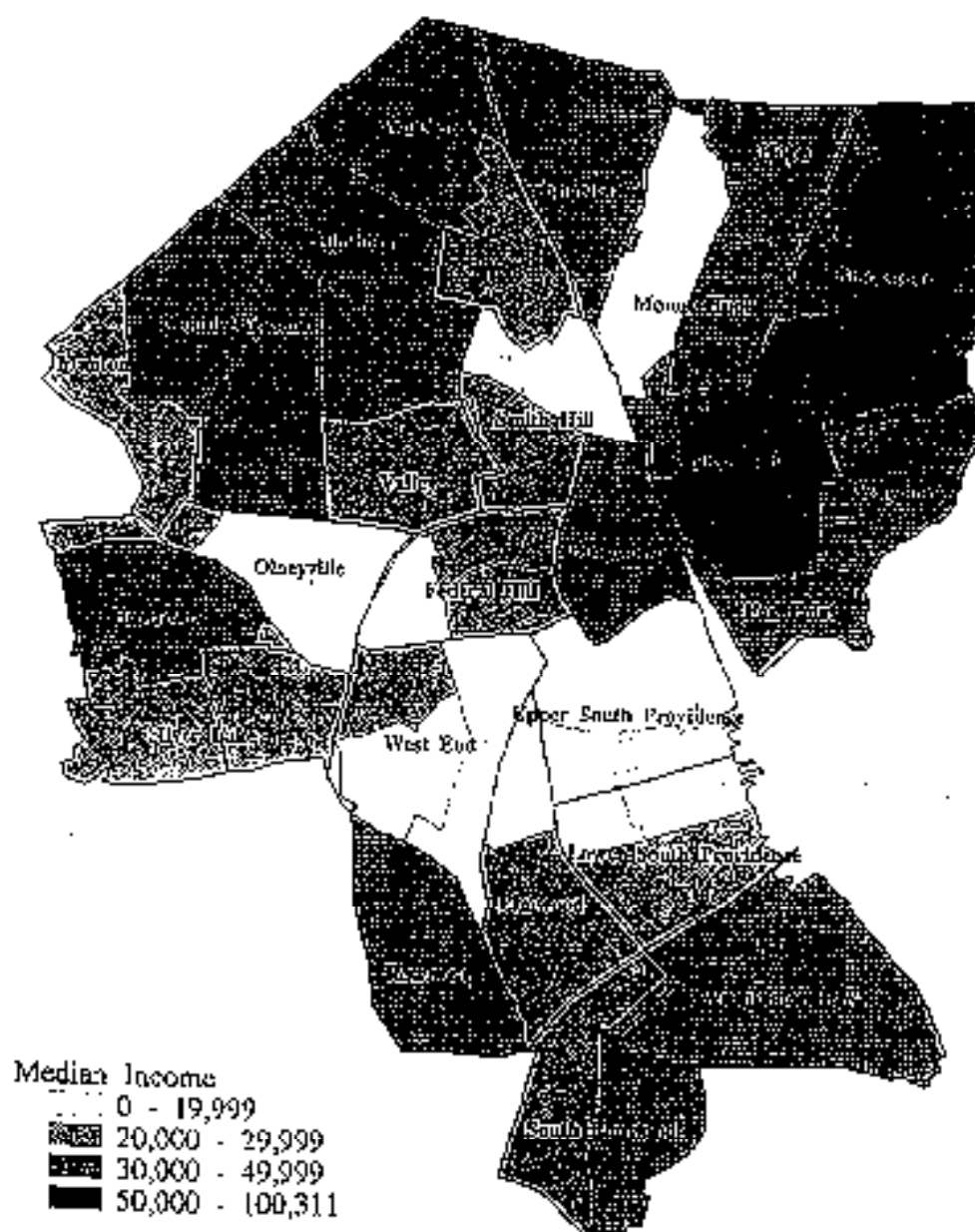
Environmental Violations in Providence



Appendix E

Median Family Income by Census Tracts

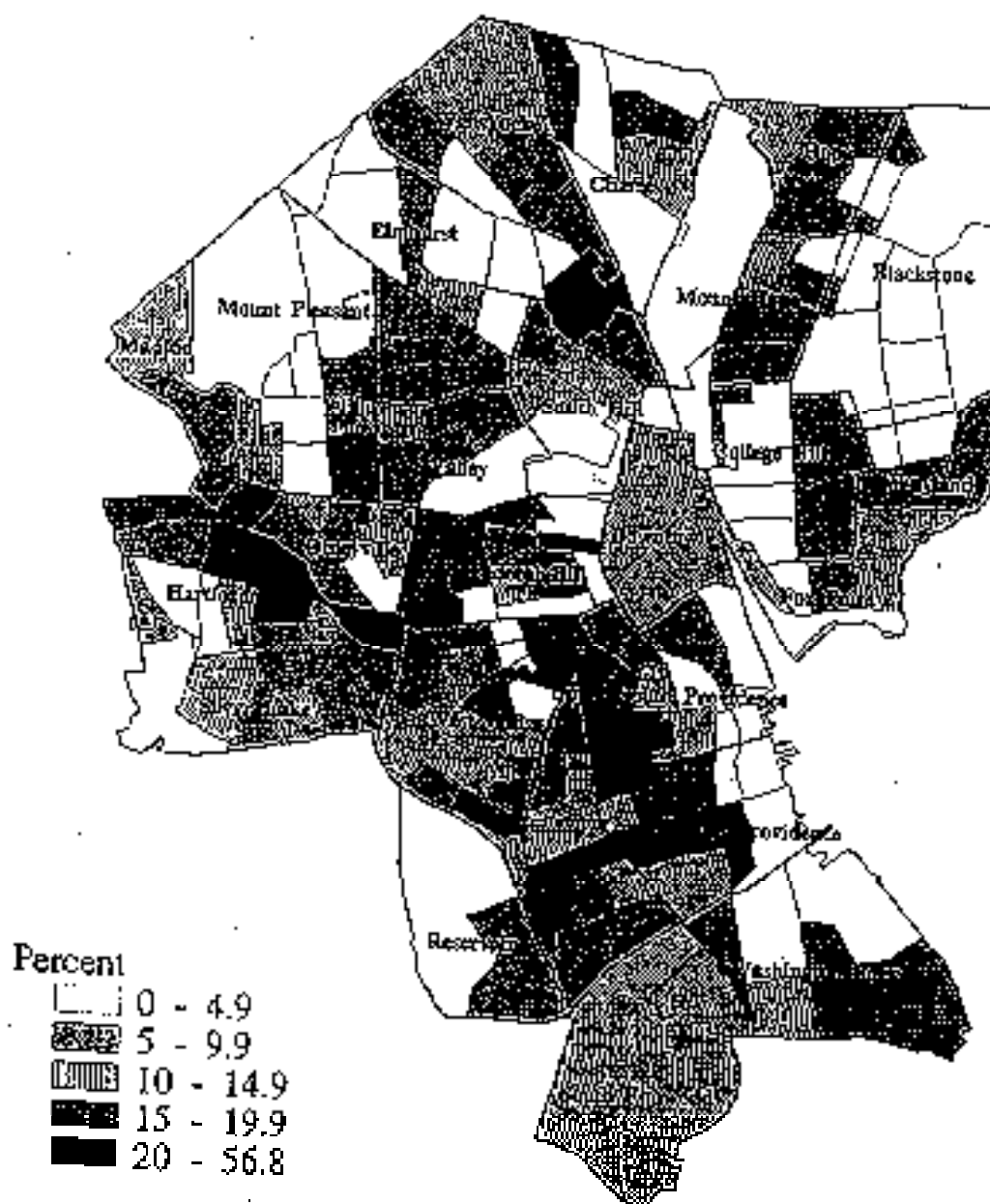
Map From Providence Plan Fact Book



Appendix F

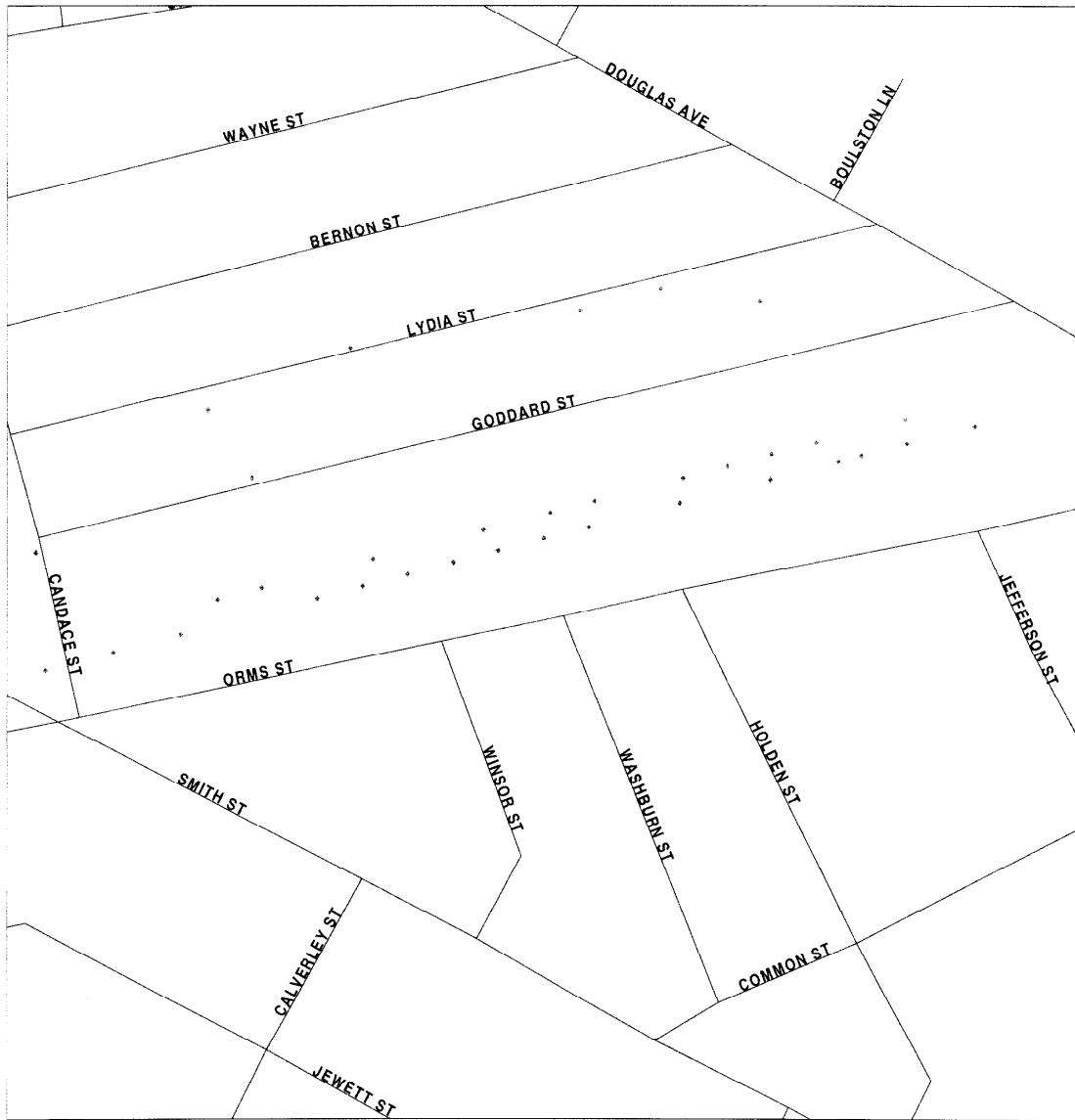
Percent Unemployed by Cens Block Group

Map From Providence Plan Fact Book



Appendix G

Violations on Goddard Street



Appendix H

Violations on Grand View Street

