

Cost Recovery Analysis of “Larger” Food Establishments

Office of Environmental Health Services
Virginia Department of Health

Executive Summary

Item 295 of the 2017 Appropriation Act (Chapter 836 of the 2017 Acts of Assembly) required the Virginia Department of Health (VDH) to examine the cost recovery from “larger” food establishments to determine if services are adequately supported and submit a report to the Chairmen of the House Appropriations and Senate Finance Committees by December 15, 2017.

In July of 2016, VDH and the Virginia Department of Agriculture and Consumer Services (VADACS) jointly adopted the 2013 U.S. Federal Drug Administration (FDA) Food Code pursuant to §35.1-14 of the Code of Virginia. In addition, VDH adopted the FDA’s Voluntary National Retail Food Regulatory Program Standards (VNRPS) which serves as a uniform method for regulatory authorities charged with administering programs related to food safety to reduce the occurrence of illnesses and deaths related to food borne illness. These mandates directly contribute to the implementation and administration of the food program and therefore impact expenditures.

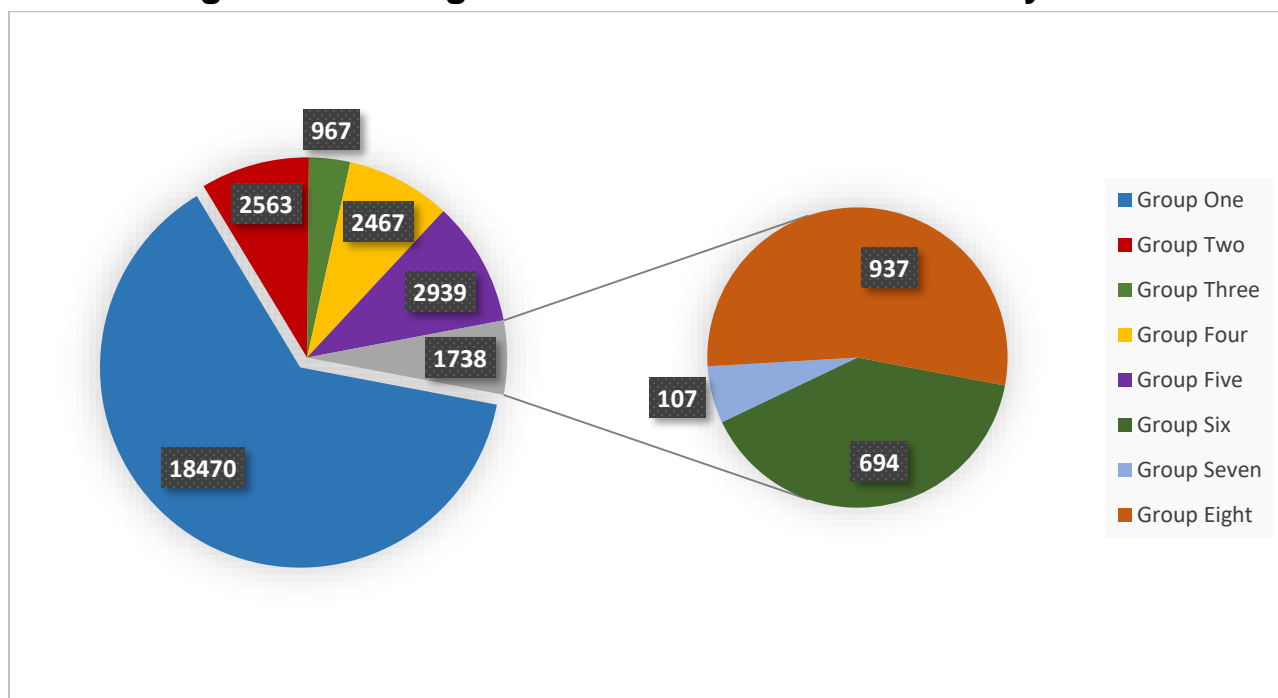
This report will outline costs associated with complying with the newly adopted FDA Food Code and the VNRPS as they relate to “larger” food establishments. Such analysis in the report shall include the following: (1) Overview of the Food Program in the Commonwealth, (2) Methodology of Study, and (3) Fee Adjustment Proposal and Alternatives.

1. Overview of Food Establishments in the Commonwealth

The General Assembly vested authority¹ to the State Board of Health to make, adopt, and enforce regulations to ensure the safe operation of food establishments in the Commonwealth. Such regulations provide a framework for minimum standards in areas such as: safe and sanitary practices regarding food handling, training standards for both environmental health and food establishment staff, and other minimum criteria ranging from hygiene standards for food establishment staff, construction and maintenance of certain food establishment structures, and components utilized to cook and handle food products.

The Commonwealth has approximately 30,000 permitted food establishments. Such food establishments range from traditional restaurants, mobile food units, food service at public schools and jails, to sporting event stadiums. As shown in Figure 1.1, traditional restaurants represent the majority of the various types of food establishments in the Commonwealth.

Figure 1.1. Categories of Food Establishments by Number



Group Key

Group 1	Traditional Food Facilities	Group 2	Health and Child Care Facilities
Group 3	Grocery and Convenience Stores	Group 4	Schools(Pre K-College)
Group 5	Catering/Commissary/Mobile Food Units	Group 6	Hotel/ Bed and Breakfast

¹ §35.1-11 of the Code of Virginia

Group 7	Correctional Facilities	Group 8	Other ²
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The 2017 fiscal year budget to implement and administer the Food program is \$20,770,105. The current fee structure permits VDH to assess a fee, not to exceed \$40.00, for the review of food establishment plans and the renewal of a food establishment permits. Based on the number of food establishments and the current fee schedule, approximately \$1.2M in fee revenue is collected each fiscal year (5.78% of the \$20,770,105 total budget).

² Movie theaters, Stadiums, Social Clubs, etc.

2. Methodology of Study

Item 295 of the 2017 Appropriation Act required the State Board of Health to examine cost recovery from “larger” food establishments to determine if services rendered are adequately supported. The information that follows provides a summary of the approach utilized to classify food establishments as “larger” as the term is not defined in regulation or in statute.

The Food Regulations (12 VAC5-421 et seq.) do not classify or rank food establishments by size. The approach to determining administrative costs associated with food establishments varies nationally; however, three methods were most frequently observed: (1) utilization of square footage of an establishment (2) utilization of the number of seats of the establishment, or (3) permitting based on risk categorization. Below is a comparison of the permitting fee schedule of the states bordering the Commonwealth. Upon a review of the bordering states, the majority have adopted a fee schedule associated with the number of seats when permitting food establishments.

Figure 2.1. Comparison of Bordering States

Locality	Method of Fee Assessment	Permit Fee
Maryland³	Fee assessed based on food establishments’ risk	\$200-500
West Virginia	Fee assessed based on seats (0-25, 25-75, >75)	\$0-500
Tennessee	Fee assessed based on seats (0-50, >51)	\$40-350
District of Columbia	Fee assessed based on seats (1-10, 11-50, 51-100, and >100)	\$300-475
Kentucky	Fee assessed based on seats (1-25, 26-50, 51 to 100, 101-200 and >201)	\$160-510
Pennsylvania	Fee assessed based on a combination of seats, square footage and if liquor permit is obtained	\$75-240
North Carolina	Permit fees vary from flat rate to fee based on seats or square footage	\$50-200

For the purposes of this study, seats will be utilized as a determinant when calculating a food establishment’s size. To develop criteria for inclusion in this study, the following data points were analyzed: (1) Number of Seats, (2) Time Spent on Inspections by Inspection Type, and (3) Cost of Inspections.

³ One locality permits based on number of seats and risk

Calculation of Number of Seats (“Large” Determination)

VDH utilized the Virginia Environmental Information System (VENIS) to extract data regarding food establishments. The VENIS database tracks information for various VDH environmental health programs including inspection and permitting information for food establishments. While seating capacity is not a required data collection point, of the approximately 30,000 food establishment records contained in VENIS, over 22,000 held information regarding seating capacity. In an effort to condense data, a representative random sample size of 361 was calculated to examine “larger” establishments and 376 was calculated to examine “smaller” establishments (Figure 2.2).

Figure 2.2. Sample Size Selection and Calculation

Total Food Establishments with Seating Capacity Data	Total Number of Seats	Average Number of Seats
22,348	2,346,131	105

Total Food Establishments with Seating Capacity Data	Total Number of Food Establishments with greater than 105 seats	Sample Size of Total Food Establishments
22,348	5,713	361 ⁴ or 6%

Total Food Establishments with Seating Capacity Data	Total Number of Food Establishments with 105 seats or less	Sample Size of Total Food Establishments
22,348	16,635	376 ⁴ or 2%

⁴ The sample size represents a 95% confidence level wherein results should reflect the overall total number of food establishments with a ±5% margin of error.

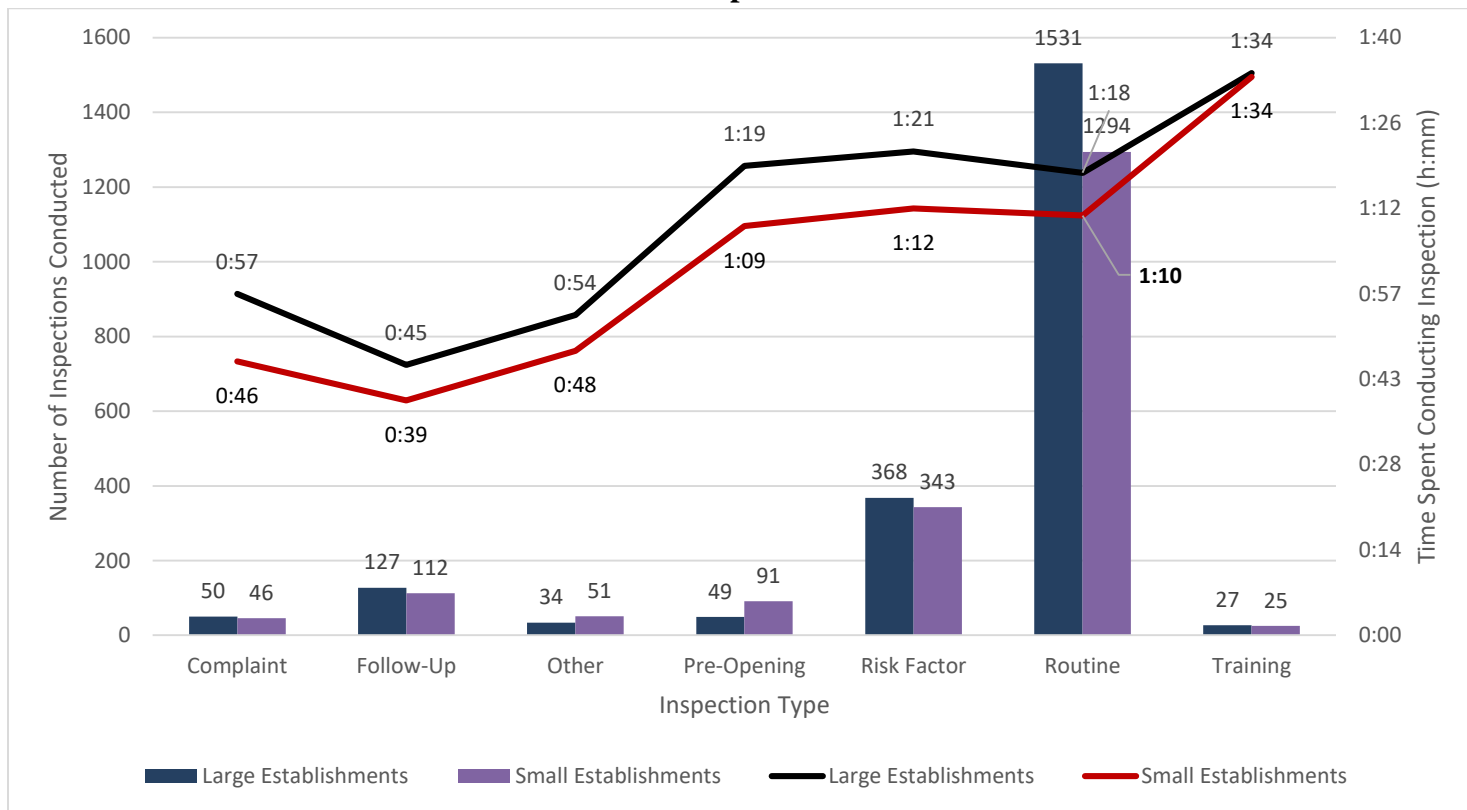
Time Spent Conducting Inspection by Type

One of the many methods utilized by VDH to reduce and prevent foodborne illness is the inspection of food establishments for regulatory compliance. Each inspection results in an inspection report which serves as a “snapshot” of a food establishment’s condition on the day and time of that inspection. VDH staff conducted approximately 70,000 food establishment inspections, of various types, during the 2017 fiscal year. The types of inspections are categorized below:

- **Routine Inspection**
 - An unannounced periodic inspection conducted to evaluate compliance with regulations.
- **Follow-Up**
 - An inspection for the purpose of re-inspecting for violations that were present at the time of the routine inspection.
- **Complaint**
 - An inspection conducted as a result of a complaint received by the health department.
- **Pre-Operational or Pre-Opening**
 - An inspection conducted to ensure, prior to opening, a food establishment meets all regulatory requirements. This includes verifying proper placement of sinks, heating and cooling elements, menu review, and verifying the food establishment’s process and procedures for excluding ill employees from food handling service.
- **Risk Factor**
 - An inspection that focuses on risk factors that may cause food-borne illness. Such factors include food products that were not obtained from a safe source, improper holding temperatures of food products, employee hygiene, and inadequate cooking temperatures.
- **Training**
 - An inspection conducted for training purposes with staff during the standardization process or as refresher training.
- **Other**
 - A joint inspection conducted with other agencies such as the Food and Drug Administration or the Virginia Department of Agriculture.

Utilizing the previously mentioned sample size, the chart below represents a breakdown of the average time spent conducting inspections on “larger” and “smaller” food establishments based on the type of inspection for FY 2017. (Figure 2.3).

Figure 2.3- Time and Inspection Type Comparison of Food Establishments Based on Sample Size



Inspections of larger food establishments required, on average, eight additional minutes of time as compared to small establishments. Of the “large” representative sample, VDH staff expended approximately 2,186 hours conducting inspections with an average time of one hour and ten minutes. When compared to smaller inspections, 1,963 hours were dedicated to conducting inspections with an average time of one hour and two minutes.

Cost of Inspections

Environmental health specialist (EHS) staff that conduct inspections of food establishments are required to become “standardized” prior to conducting regulatory inspections independent of supervisory staff. The standardization process consists of a combination of in-classroom and field training to ensure staff can demonstrate certain knowledge, skills, and abilities to adequately perform inspections. Upon completion of standardization, EHS staff are re-banded to a new pay level with an average hourly salary of \$30.39 which includes fringe benefits. Based on an EHS staff member’s hourly rate, the inspection costs of larger food establishments are roughly \$35.46 per inspection while smaller food establishments are \$31.40. A difference of \$4.05.

Cost Recovery Analysis

In addition to the cost of conducting an inspection, EHS staff are required to perform basic administrative duties such as plan reviews⁵, data input for inspections, and travel to conduct inspections⁶. These duties, while not all-encompassing of the tasks performed by EHS staff, reflect core responsibilities. The following chart outlines the cost of inspection and basic administrative duties for larger restaurants and the recoupment of fees utilizing the current fee schedule. (Figure 2.4)

Figure 2.4 Cost to Inspect Larger Inspections Calculation

Number of Plan Reviews	Average Time Plan Review	Rate of EHS Staff	Total Plan Review Cost
285	4 hours	\$30.39 per hour	\$34,644.60
Total Number of Inspections	Average Time for Data Entry per Inspection	Personnel Cost of Data Entry Per Inspection	Total Data Entry Cost
24,755	45 minutes	\$22.79	\$564,166.45
Total Number of Inspections	Average Time For Inspection of Large Food Establishment	Per Inspection Rate of EHS Staff	Total Cost Inspection Time
24,755	1 hour : 10 minutes	\$35.46 per inspection	\$877,812.30
Total Cost to Inspect Larger Establishments			\$1,476,623.35
Current Fee Schedule	Total Large Food Establishments	Total Recoupment Under Current Fee Schedule	
\$40.00	5,713	\$228,520.00	

As demonstrated by this analysis, the fee revenue only covers 15% of the total cost of administering the food program for larger restaurants.

⁵ Plan Review: EHS staff reviews food establishment plans (schematics, menu, equipment, etc.) to ensure effective processes for food safety are applied in the initial design and construction of new food establishments, as well as the redesign, remodel or conversion of such establishments.

⁶ Personnel cost associated with travel was excluded from Figure 2.4 as data is not available to analyze cost to travel specifically to "larger" establishments. However, the average total travel cost per environmental health specialist to conduct inspections of food establishments is \$9,686.14. This amount is calculated based on a travel cost per day of \$36.97 for a period of 262 days per year.

3. Fee Adjustment Proposal and Alternatives

VDH proposes the following policy options that would apply to all food establishments in lieu of the development of a fee structure based on size:

- A** Fee Revenue Adjustment Incremental Increase
- B** Fee Revenue Adjustment Flat Increase
- C** Fee Revenue Adjustment Based on Risk Categorization
- D** Provision for the Collection of Penalty Fees

Policy options A, B, and C and designed to enable VDH to recoup up to one-third of the total cost of the Food program.

A. Fee Revenue Adjustment Incremental Increase

Proposal to increase permit fee revenues over the course of five years in increments of \$39.60 per year until the total proposed fee increase of \$238.00⁷ is reached.

FY 2018 – \$40.00 fee + \$40.00 increase (100%)= \$80.00

FY 2019 – \$80.00 fee + \$40.00 increase (50%) = \$120.00

FY 2020 – \$120.00 fee + \$40.00 increase (33%) = \$160.00

FY 2021 – \$160.00 fee + \$40.00 increase (25%) = \$200.00

FY 2022 – \$200.00 fee + \$38.00 increase (19%) = \$238.00

B. Fee Revenue Adjustment Flat Increase

Proposal to increase permit fee revenues from the current fee schedule of \$40.00 to \$238.00 immediately upon approval of the 2018 Appropriation Act.

⁷ Dividing the total budget of \$20,770,105 among the total number of food establishments (29,146) would equate a cost of \$712.62 per food establishment. One-third of the cost per food establishment is \$237.54.

C. Fee Revenue Adjustment Based on Risk Categorization

Proposal as a policy option to adopt the following fee schedule based on risk categorization of the food establishment:

- Risk Categorization 1 (23% of the total food establishment population): \$150.00
- Risk Categorization 2 (42% of the total food establishment population): \$225.00
- Risk Categorization 3 (26% of the total food establishment population): \$300.00
- Risk Categorization 4 (9% of the total food establishment population): \$375.00

The staggered approach by risk category, represents an average of \$238.00 per establishment which constitutes approximately 1/3 of the total revenue required to administer and implement the Food Regulations.

The following provides background information regarding the role of risk characterization and food safety, the schedule of inspection frequency based on the risk characterization of a food establishment, and a data comparison of inspections conducted based on risk characterization and those conducted based on the food establishment's size.

In an effort to achieve uniformity in the application of regulations as it pertains to food safety in the Commonwealth, VDH elected to promulgate regulations and adopt guidelines and policy developed from the Food and Drug Administration (FDA) as follows:

- Adoption of the most recent FDA Food Code
- Standardization of Inspection Personnel
- Enrollment in the Voluntary National Retail Food Regulatory Program Standards (VNRPS Standards)

The VNRPS Standards were developed through contributions from federal, state, and local regulatory officials, industry, trade and professional associations, academia, and consumers. Their input provided the framework that defines an effective retail food regulatory program. The ultimate goal of the VNRPS Standards is to reduce or eliminate the occurrence of food borne illnesses /or deaths and to identify areas of causation. The VNRPS Standards consist of nine interconnected parts which uniquely address a key aspect of the retail food regulatory program, stress the importance of uniformity in training, compliance strategies, and the importance of risk factor based inspections. For the proposes of this study, focus is placed on Standard 3.

VNRPS Standard 3

The VDH environmental health staff utilize hazard analysis and critical control point⁸ (HACCP) principles to control risk factors in the retail food inspection program. Risk factors are actions that occur in food establishments that have the likelihood that if done incorrectly, could have an adverse effect on health (for example improper washing of hands, food not stored at proper temperatures, etc.).

Studies⁹ have shown that factors such as the type of food served, the food preparation processes used, the volume of food, and the population served all have a bearing on the occurrence of foodborne illness in retail and foodservice establishments. Standard 3 requires food establishments be grouped into at least three categories based on their potential and inherent food safety risks. The level of risk determines the minimum inspection frequency. This process of assigning risk ensures resources are allocated to focus on those food establishments where the threat to food safety is greatest. In Virginia, food establishments are divided into four categories and assigned a frequency of inspection as outlined in the table below:

Figure 3.2 Risk Categorization of Food Establishments

RISK CATEGORY	DESCRIPTION	FREQUENCY#/YR
1	Examples include most convenience store operations, hot dog carts, and coffee shops. Establishments that serve or sell only pre-packaged, non-time/temperature control for safety (TCS) ¹⁰ foods. Establishments that prepare only non-TCS foods. Establishments that heat only commercially processed, TCS foods for hot holding. No cooling of TCS foods. Establishments that would otherwise be grouped in Category 2 but have shown through historical documentation to have achieved active managerial control of foodborne illness risk factors.	1
2	Examples may include retail food store operations, schools not serving a highly susceptible population, and	2

⁸ Hazard analysis and critical control points or HACCP is a systematic preventive approach to food safety from a biological, chemical, and physical hazards in product processes approach.

⁹ Neal, J. A., Binkley, M., and Henroid, D. (2012) Assessing Factors Contributing to Food Safety Culture in Retail Food Establishments. *Food Protection Trends*, Vol. 32 (No. 8), pages 468-476 Center for Disease Control. Food and Drug Administration. (2014). FDA Trend Analysis Report on the Occurrence of Foodborne Illness Risk Factors in Selected Institutional Foodservice, Restaurant and Retail Food Store Facility Types. Washington, DC: U.S. Government Printing Office

¹⁰ Time/temperature control for safety food or "TCS food" means food that requires both time and temperature controls to limit the growth of bacteria.

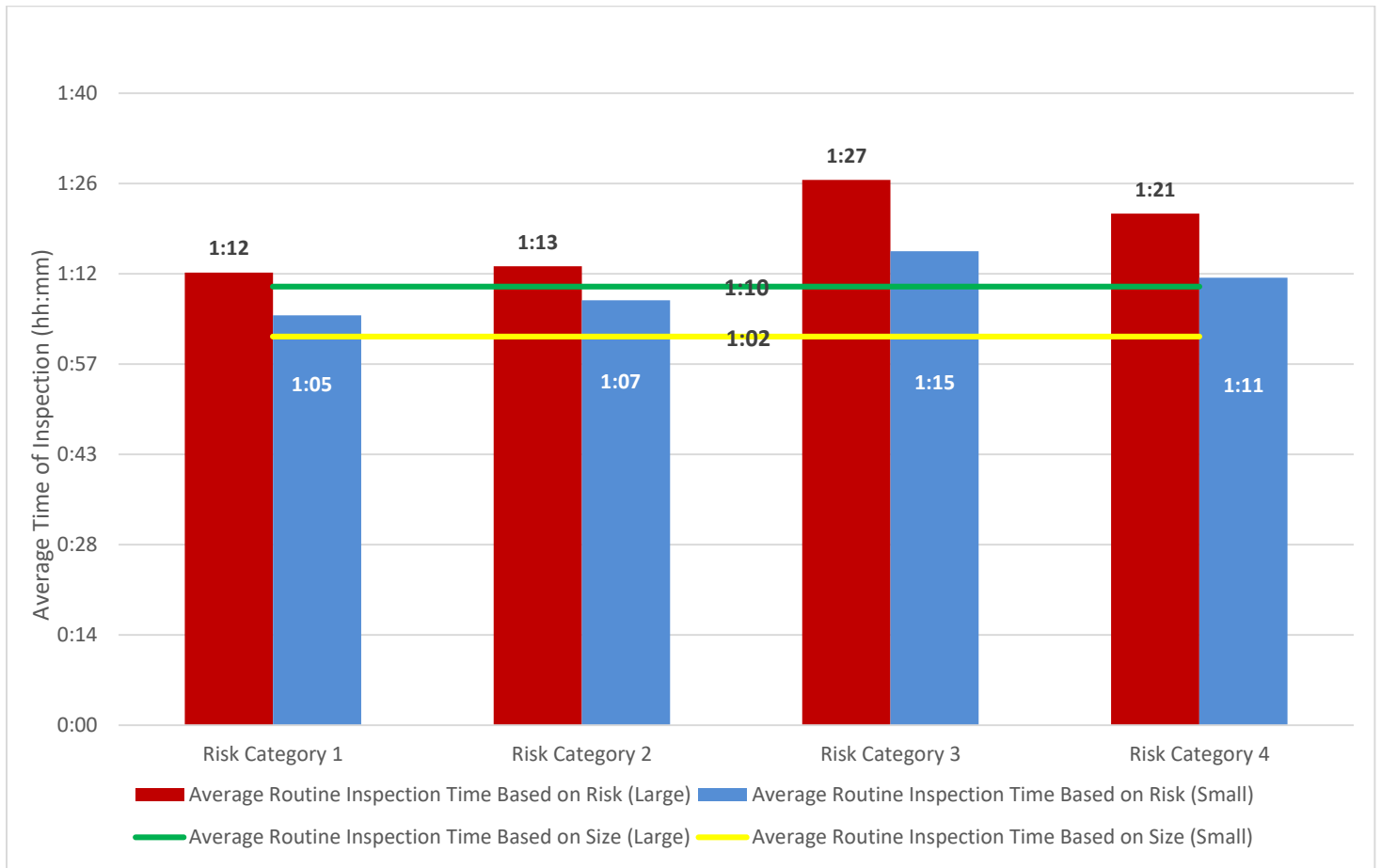
Cost Recovery Analysis

	<p>quick service operations. Limited menu. Most products are prepared/cooked and served immediately. May involve hot and cold holding of TCS foods after preparation or cooking. Complex preparation of TCS foods requiring cooking, cooling, and reheating for hot holding is limited to only a few TCS foods.</p> <p>Establishments that would otherwise be grouped in Category 3 but have shown through historical documentation to have achieved active managerial control of foodborne illness risk factors. Newly permitted establishments that would otherwise be grouped in Category 1 until history of active managerial control of foodborne illness risk factors is achieved and documented.</p>	
3	<p>An example is a full service restaurant. Extensive menu and handling of raw ingredients. Complex preparation including cooking, cooling, and reheating for hot holding involves many TCS foods. Variety of processes require hot and cold holding of TCS food.</p> <p>Establishments that would otherwise be grouped in Category 4 but have shown through historical documentation to have achieved active managerial control of foodborne illness risk factors. Newly permitted establishments that would otherwise be grouped in Category 2 until history of active managerial control of foodborne illness risk factors is achieved and documented.</p>	3
4	<p>Examples include preschools, hospitals, nursing homes, and establishments conducting processing at retail. Includes establishments serving a highly susceptible population or that conduct specialized processes, e.g., smoking and curing; reduced oxygen packaging for extended shelf-life.</p>	4

VDH requires local health department staff to inspect food establishments in accordance with Figure 3.2. The above inspection schedule in Figure 3.2 includes the requirement that at least one periodic inspection be conducted annually as outlined in §35.1-22 of the Code of Virginia.

Routine inspections, as previously detailed, are the most common type of inspection conducted by environmental health staff. When comparing time spent conducting routine inspections based on seating capacity and time spent conducting routine inspections based on risk, time spent rises steadily as the level of risk increases (Figure 3.3). This increase in time translates into an increase in cost.

Figure 3.3 Comparison of Average Routine Inspection Times Based on Risk Characterization



D. Provision for Collection of Penalty Fees

The Food Regulations require staff to complete an inspection prior to the renewal of a food establishment permit. In some instances, local health department staff are “rushed” by the renewing food establishment to conduct an inspection because the establishment submitted a renewal request after their current permit had expired. Such requests result in a reallocation of staffing and man power causing delays which result in overtime expenditures, reduction of inspections being conducted on-time pursuant to statutory mandates, and delays of inspections for other establishments. Based on a sample size of the total food establishment population, an assessment of a gradually-increasing monetary late fee could amount to \$240,475.00 in additional revenue (Figure 3.1). Food establishments with outstanding fees greater than 90 days would be required to submit a new permit and plan review application and fee.

Figure 3.1 Late Fee Assessment Schedule

Total Number of Food Establishments	Number of Food Establishments 1-30 days late	Number of Food Establishments 31-60 days late	Number of Food Establishments 61-90 days late	Number of Food Establishments 90+ days late
29,146	2,623	1749	1166	583

Days Late	# of Food Establishments Late	Proposed Late Fee Assessment	Total Late Fee Revenue
1-30	2,623	\$25.00	\$65,575.00
31-60	1749	\$50.00	\$87,450.00
61-90	1166	\$75.00	\$87,450.00
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4. Conclusion

Currently the cost to administer and implement the Food Regulations is heavily subsidized by taxpayers. Based on the current fee schedule, VDH only recoups six percent of the food program’s total budget from permit holders. Upon reviewing the data analyzed above, the costs of inspection a food establishment is not dependent on the size of the facility. Several variables such as frequency of inspection, complex food processes, risk characterization, and level of compliance to the Food Regulations contribute to overall costs.

Should the General Assembly desire for the food program to be more sustained by permit holders, there are a variety of approaches as described above. This report provides three policy options that allow for a fee increase to cover up to one-third of the costs, as well as the implementation of a penalty system for permit holders that do not renew their permit timely.