

PERFORMANCE AUDIT OF

THE FOOD SANITATION INSPECTION PROGRAM

within the

DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

SEPTEMBER 1996

AUDITOR'S TRANSMITTAL

September 23, 1996

The Honorable James B. Hunt, Jr., Governor
Secretary Jonathan B. Howes,
Department of Environment, Health and
Natural Resources
Members of the North Carolina General Assembly

Ladies and Gentlemen:

We are pleased to submit this performance audit report of the food sanitation inspection program administered by the Food, Lodging, and Institutional Sanitation Branch, Environmental Health Services Section, Division of Environmental Health, Department of Environment, Health and Natural Resources. The objectives of this audit were to review current organization and evaluate the efficiency and effectiveness of the program at the state level.

This report consists of an executive summary, program overview, and operational findings and recommendations. The Secretary of the Department of Environment, Health and Natural Resources has reviewed a draft copy of this report and written comments are included.

We wish to express our appreciation to Secretary Howe and his staff for the courtesy, cooperation, and assistance provided us during this performance audit.

Respectfully submitted,



Ralph Campbell, Jr.
State Auditor

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EXECUTIVE SUMMARY

We have conducted a performance audit of the state level administrative and oversight functions for the ***Food Sanitation Inspection Program*** (program) within the Department of Environment, Health and Natural Resources. This program is designed to protect the public from foodborne diseases through periodic inspections of restaurants and other establishments that prepare food and drink for pay. Inspections of restaurants are performed by **county** environmental health specialists who function as agents of the State. The county specialists review a facility's food handling practices, food storage, ventilation, and waste disposal for sanitary conditions. We did not audit the implementation of the program at the county level.

The focus of our audit was the **state level administrative and oversight functions** for the program. State level functions include: overall program administration, collection and distribution of licensing fees, statistical compilation and analyses, research on program issues, plan review, and consultation with county specialists and food industry personnel. Program oversight is accomplished by seven **state regional specialists** who work directly with county specialists. The regional specialists are responsible for performing evaluations of county programs; accompanying new county specialists on inspections visits to "authorize" the county specialist to conduct inspections independently; performing inspections of state institutions; and participating as instructors in the centralized training classes conducted by the State.

We examined program operating policies, practices, controls, and activities, as well as the current organization and staffing of the Food, Lodging, and Institutional Sanitation Branch which is responsible for administering the program. This report is directed toward those areas where we feel improvements can be achieved in the state level administration and oversight of the program. We do not intend to imply that there are not many commendable aspects of the current operations of the program. The period we reviewed was July 1994 through June 1996. Our field work began in 1995 and concluded in 1996.

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AUDIT OBJECTIVES, SCOPE, AND METHODOLOGY

North Carolina's General Statutes provide for the auditing of state agencies by the independent State Auditor. Performance audits review the economy, efficiency, and effectiveness of state government programs. This is achieved by examining operating policies, practices, controls, and activities to determine where improvements may be made in the use of public resources and the management of programs.

We have completed a review of the *food sanitation inspection program for restaurants* administered by the Food, Lodging, and Institutional Sanitation Branch (Branch) of the Division of Environmental Health, Environmental Health Services Section. The North Carolina Department of Environment, Health and Natural Resources has overall jurisdiction for this program.

Our audit objectives were to:

- Review the organizational structure to identify the functions and responsibilities of Branch personnel, as well as the lines of authority.
- Review and evaluate the effectiveness and efficiency of the fee collection process.
- Review the status of the computer pilot project.
- Review the efficiency of the plan review process.
- Evaluate the efficiency of the Orientation and Initial Internship Training Classes.
- Determine the number of inspections performed by the individual counties.

The scope of this audit was limited to a review of the *food sanitation inspection program for restaurants*. This included a review of operations at the state level, as well as operations at the county level. State level personnel have oversight responsibility for this program. County environmental health specialists function as agents of the state in administering the food sanitation program. Audit work was performed at the state offices in Raleigh, NC, as well as at selected county health departments in the western, central, and eastern parts of the state.

Initial field work for this audit was performed from March through June 1995. At that point in the audit process, it was necessary to suspend this audit in order to complete other legislatively mandated audits within the required time frames. In May 1996, the performance audit of the food sanitation inspection program was resumed. The objectives and scope of the audit remained the same as described above. To conclude the audit, we revisited the preliminary issues identified in June 1995 to determine the current status and to identify any significant changes in the organizational structure and operational procedures. This report summarizes our findings and recommendations for the food sanitation inspection program for the work begun in 1995 and concluded in 1996.

AUDIT OBJECTIVES, SCOPE, AND METHODOLOGY (CONCLUDED)

To accomplish our objectives, we used the following methodology:

- Conducted interviews with key personnel at the federal, state, and county levels, as well as members of the North Carolina Restaurant Association and the North Carolina State Board of Sanitarian Examiners.
- Reviewed applicable reports and studies on food inspection programs in other states.
- Reviewed applicable statutes, regulations, rules, policies, and procedures.
- Reviewed and analyzed data provided by the Branch.

This performance audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States.

BACKGROUND INFORMATION

AUDIT OVERVIEW

The protection of the health, safety, and welfare of citizens is one of the major responsibilities of state government. An important program designed to protect the public is that of inspecting restaurants and other establishments that prepare or serve food and drink for pay. During the past year, there have been reports of potential problems with restaurant inspections and reports of citizens becoming ill from foodborne diseases. As part of our annual audit plan, the Office of the State Auditor identified a need to audit the food inspection program.

Auditor's Note: Since our initial work in 1995, the Branch has made changes which move the program closer to the federal criteria and strengthen the program.

MISSION

The food sanitation inspection program for restaurants is a segment of the Food, Lodging, and Institutional Sanitation Branch of the Division of Environmental Health (Division), Department of Environment, Health and Natural Resources (DEHNR). As such, the food sanitation inspection program for restaurants assists the Division in accomplishing its mission. The mission of the Division, as set forth in its mission statement is “. . . to safeguard life, promote human health, and protect the environment through the practice of modern environmental health science, the use of technology, rules, public education, and above all, dedication to the public trust.” The Division’s mission promotes the broader mission of DEHNR, which is “. . . to promote, protect, and conserve the environment, health, and natural resources of North Carolina and its citizens through responsible stewardship and excellence in public service.”

STATUTORY AUTHORITY

The Department of Environment, Health and Natural Resources has a statutory responsibility for making available certain health services to the citizens of North Carolina as directed by the Commission for Health Services. General Statute §130A-248 provides that for the protection of the public health, the Commission for Health Services (Commission) “. . . shall adopt rules governing the sanitation of establishments that prepare or serve drink or food for pay” The rules adopted by the Commission are recorded in the North Carolina Administrative Code Title 15A, Subchapter 18A, Section 2600. These rules provide the basis for the sanitation inspections of restaurants and food handling establishments. The Food, Lodging, and Institutional Sanitation Branch of the Division of Environmental Health, Environmental Health Services Section, is charged with administering the program from the state level. The actual inspections of restaurants and food handling establishments are conducted by county

BACKGROUND INFORMATION (CONTINUED)

environmental health specialists who function as agents of the State. To inform the public of a facility's sanitation, the General Statutes provide for a grading system which requires that the assigned grade be displayed in a prominent location.

Included in the Commission's rules are requirements for the review and approval of plans and specifications for new food service establishments by the local health agency. The rules further stipulate that plans for food handling establishments that are prototype "franchised" or "chain" facilities must be submitted to the Environmental Health Services Section (Section) for review and approval at the state level.

Other rules, regulations, and laws require the Section to review plans other than those for food handling facilities. The rules also require the plans for prototype "franchised" or "chain" *lodging* facilities be submitted to the Section. Additionally, General Statute §130A-5 requires the Secretary ". . . to be health advisor of the State and to advise state offices in regard to the location, sanitary construction and health management of all state institutions . . ." Therefore, all of the State's new construction for institutions, confinement facilities, and state buildings which have food service operations are also reviewed by the Food, Lodging, and Institutional Sanitation Branch.

ORGANIZATIONAL STRUCTURE

Organizationally, the Food, Lodging, and Institutional Sanitation Branch (Branch) is a segment of the Environmental Health Services Section, which falls under the jurisdiction of the Division of Environmental Health, Department of Environment, Health and Natural Resources. The Environmental Health Services Section consists of a Section Chief, an Assistant Section Chief, and four Environmental Health Program Supervisors. The Branch is overseen by an Environmental Health Program Supervisor who reports to the Assistant Section Chief. For more organizational detail, see the organizational charts in Exhibits 1 and 2 on pages 8 and 9.

The Environmental Health Program Supervisor in charge of the Branch generally works with legislative and rule making issues; conducts research for the Program; and acts as a resource for local health departments, the regional specialists, and the food related industry. The Environmental Engineer II is responsible for performing all plan reviews at the state level. He also acts as a reference for plan reviewers at the county level. The engineering position reports to the Program Supervisor. An Office Assistant III supports both the engineering position and the Program Supervisor. To facilitate workload distribution, the state has been divided into seven regions. (See map on page 10.) There are seven regional specialists currently assigned to the Branch. Their duties include performing evaluations of county programs; "authorizing"* environmental health specialists; performing inspections of state institutions; and participating as instructors in the centralized training classes conducted by the Section.

* The regional specialist evaluates the performance of each county environmental health specialist before he/she is allowed to perform inspections alone. This involves accompanying the county specialist on several inspections to confirm that he/she is conducting inspections in accordance with the rules set forth by the Health Commission.

BACKGROUND INFORMATION (CONTINUED)

The food sanitation inspection program is implemented by the county health departments. The county environmental health specialists inspect restaurants, food stands, mobile food units, pushcarts, school lunchrooms (public and private), elderly nutrition sites, commissaries, and limited food service establishments. Additionally, some county environmental health specialists are required to perform plan reviews for new facilities and for renovations to existing buildings. Table 1 to the right shows the number of food serving facilities by county. During the fiscal year 1994-95, county environmental health agencies performed 57,810 inspections on 21,851 food handling facilities.

Various organizational structures are found at the county level. Most of the variances are driven by logistics, the availability of funding, and/or the availability of personnel. Some of the larger counties have several environmental

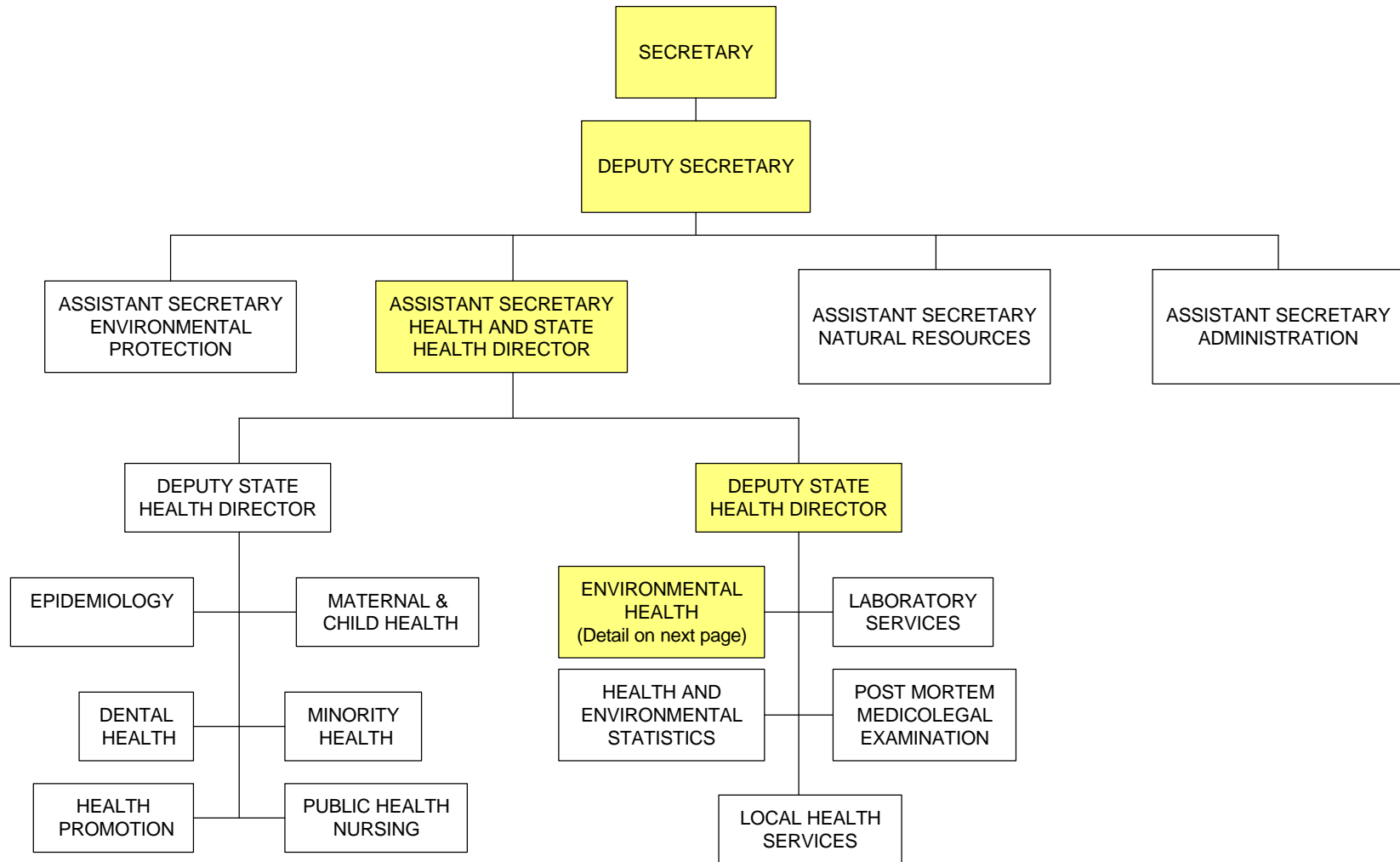
health specialists, thereby allowing them to specialize in a particular area such as food and lodging. Some of the smaller counties have only one or two environmental health specialists who must cover all areas including food and lodging, lead, waste water, etc. Some counties have individuals who specialize in plan review, while some counties have the same people do inspections and plan review. Because of various constraints, some counties do not have the resources to perform plan reviews.

TABLE 1 FOOD SANITATION INSPECTION PROGRAM NUMBER OF FOOD SERVING FACILITIES BY COUNTY AS OF JUNE 1996							
COUNTY	No.	COUNTY	No.	COUNTY	No.	COUNTY	No.
Alamance	366	Cumberland	734	Johnston	291	Randolph	246
Alexander	70	Currituck	60	Jones	27	Richmond	123
Alleghany	47	Dare	285	Lee	147	Robeson	338
Anson	72	Davidson	322	Lenoir	191	Rockingham	249
Ashe	68	Davie	64	Lincoln	117	Rowan	294
Avery	90	Duplin	151	Macon	126	Rutherford	197
Beaufort	120	Durham	697	Madison	50	Sampson	159
Bertie	52	Edgecombe	176	Martin	86	Scotland	118
Bladen	128	Forsyth	914	McDowell	122	Stanly	171
Brunswick	231	Franklin	76	Mecklenburg	2166	Stokes	82
Buncombe	644	Gaston	498	Mitchell	58	Surry	235
Burke	216	Gates	19	Montgomery	74	Swain	86
Cabarrus	254	Graham	29	Moore	290	Transylvania	98
Caldwell	205	Granville	106	Nash	279	Tyrrell	12
Camden	10	Greene	40	New Hanover	564	Union	255
Carteret	281	Guilford	1250	Northampton	50	Vance	136
Caswell	48	Halifax	164	Onslow	330	Wake	1603
Catawba	477	Harnett	178	Orange	332	Warren	50
Chatham	122	Haywood	203	Pamlico	37	Washington	44
Cherokee	78	Henderson	240	Pasquotank	106	Watauga	198
Chowan	42	Hertford	85	Pender	93	Wayne	281
Clay	26	Hoke	81	Perquimans	30	Wilkes	172
Cleveland	260	Hyde	32	Person	120	Wilson	248
Columbus	167	Iredell	346	Pitt	378	Yadkin	96
Craven	258	Jackson	134	Polk	56	Yancey	47

Source: Department of Environment, Health and Natural Resources

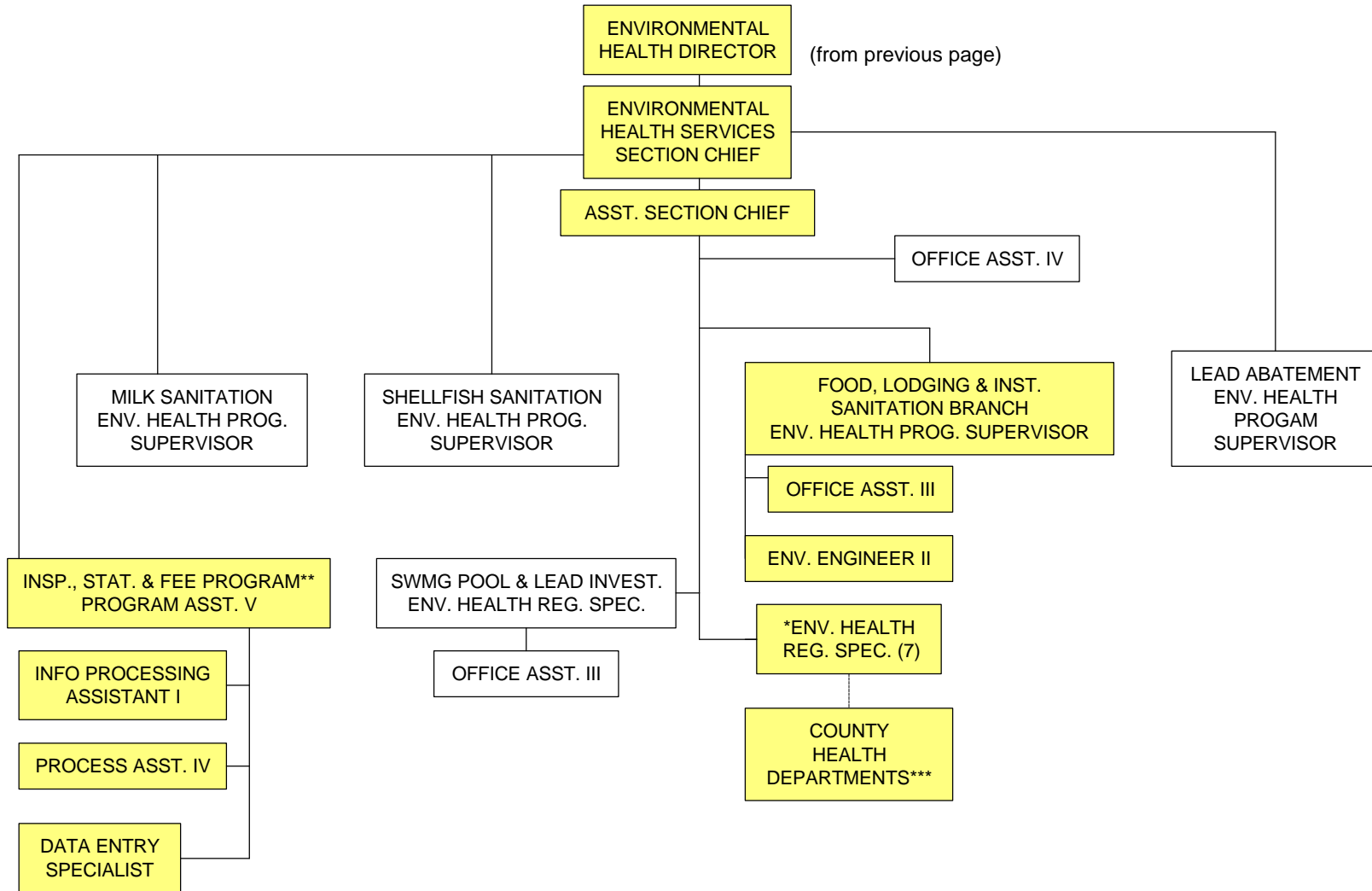
EXHIBIT 1 DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES ORGANIZATION CHART AS OF JUNE 30, 1996

Note: Boxes in yellow denote the chain of command for the food sanitation inspection program.



Source: Department of Environment, Health and Natural Resources

**EXHIBIT 2
ORGANIZATIONAL STRUCTURE OF
ENVIRONMENTAL HEALTH SERVICES SECTION
AS OF JUNE 30, 1996**



*The regional specialists are responsible for oversight of environmental health services programs at the county level.

**The Fees Unit collects statistics for other programs in the section.

***County health departments are responsible for conducting the food sanitation inspection program as well as other environmental programs.

Source: Department of Environment, Health and Natural Resources

BACKGROUND INFORMATION (CONCLUDED)

BUDGETARY DATA

The food sanitation inspection program is one of fifteen programs included in the Environmental Health Services Section's budget. (See auditor's note.) The budget for this program, which includes the Inspection, Statistics and Fees unit, was \$2,651,609 for the fiscal year ending June 30, 1995, and \$2,747,419 for fiscal year ending June 30, 1996, funded primarily by appropriations. Expenditures for the food sanitation inspection program are not broken out in the Section's accounting records; however, salaries and benefits for the employees who work in this program at the state level totaled to approximately \$599,000 for fiscal year ending June 30, 1996.

Auditor's Note: At the time of the audit, the Department did not capture budgetary data by specific program. We suggest that the Department explore with the Office of the State Controller the capabilities of the North Carolina Accounting System in providing a more detailed level of accounting.

Each county receives \$6,000 annually from a \$600,000 appropriation to the Department which helps fund the cost of environmental health programs. The section generates receipts from the issuance of permits to food and lodging facilities. These receipts are used to offer additional support to the counties, as well as maintain a computer database and support other administrative functions. The General Statutes stipulate

that the state may retain no more than 33 1/3% of permit fees to support the program activities. The remaining 66 2/3% is remitted to the counties to provide additional funding for their environmental health programs. For fiscal year 1994-95, the Division collected \$582,225 in fees and remitted them to the counties as shown in Table 2. The county health departments also receive appropriations from local governments. Because of limited resources (money and personnel), twenty-two of the counties have joined forces to form coalitions or districts. The remaining seventy-eight counties have individual programs.

TABLE 2 FOOD SANITATION INSPECTION PROGRAM DISTRIBUTION OF FEES BY COUNTY FISCAL YEAR ENDING JUNE 1995							
COUNTY	\$	COUNTY	\$	COUNTY	\$	COUNTY	\$
Alamance	7589.69	Cumberland	16023.26	Johnston	3821.56	Randolph	5961.18
Alexander	1039.81	Currituck	1470.82	Jones	978.19	Richmond	2558.57
Alleghany	1393.72	Dare	4816.10	Lee	2285.47	Robeson	7692.12
Anson	2024.05	Davidson	4581.71	Lenoir	1836.81	Rockingham	3937.98
Ashe	1812.03	Davie	2016.69	Lincoln	2740.64	Rowan	3815.37
Avery	1861.27	Duplin	2305.90	Macon	2036.21	Rutherford	4926.61
Beaufort	2418.92	Durham	10247.70	Madison	3712.97	Sampson	3522.86
Bertie	1883.30	Edgecombe	2809.05	Martin	1335.20	Scotland	2297.54
Bladen	2429.41	Forsyth	7215.15	McDowell	2438.92	Stanly	3568.54
Brunswick	6471.11	Franklin	1853.53	Mecklenburg	25780.19	Stokes	2206.79
Buncombe	6106.04	Gaston	7616.44	Mitchell	1225.59	Surry	3480.96
Burke	2558.26	Gates	833.60	Montgomery	2157.43	Swain	3385.80
Cabarrus	5961.18	Graham	1503.08	Moore	4305.83	Transylvania	2914.19
Caldwell	3386.22	Granville	2206.51	Nash	3960.28	Tyrrell	943.78
Camden	894.42	Greene	926.49	New Hanover	9271.74	Union	4029.94
Carteret	3545.37	Guilford	14956.30	Northampton	1294.94	Vance	2581.48
Caswell	1060.55	Halifax	4131.52	Onslow	8392.15	Wake	19256.82
Catawba	6390.28	Harnett	1880.78	Orange	4543.01	Warren	1350.68
Chatham	2906.83	Haywood	4367.14	Pamlico	1350.68	Washington	1605.50
Cherokee	2354.90	Henderson	5957.50	Pasquotank	2857.46	Watauga	4183.22
Chowan	1700.55	Hertford	1771.16	Pender	2158.83	Wayne	7076.09
Clay	872.61	Hoke	1096.16	Perquimans	1369.70	Wilkes	790.87
Cleveland	2267.82	Hyde	1291.23	Person	1431.19	Wilson	5813.08
Columbus	3018.37	Iredell	4673.67	Pitt	5899.83	Yadkin	2176.16
Craven	3322.12	Jackson	3049.33	Polk	1620.99	Yancey	1485.68
GRAND TOTAL							\$385237.27
Source: Department of Environment, Health and Natural Resources							

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FINDINGS AND RECOMMENDATIONS

A number of the following recommendations have to do with staffing issues. Exhibits 4 and 5, pages 17 and 18, contain organizational charts depicting our proposed alternatives based on the recommendations.

THE FOOD, LODGING, AND INSTITUTIONAL SANITATION BRANCH IS NOT ADEQUATELY STAFFED AT THE REGIONAL LEVEL.

Chapter §130A of the General Statutes requires the Secretary of the Department of Environment, Health and Natural Resources to ensure the public’s health when eating in a food establishment in North Carolina. While the actual program is carried out at the county level, it is monitored by the State. The state has seven regional environmental health specialists who oversee all 100 county operations. These regional specialists are responsible for eleven to nineteen counties each. They monitor local programs through program reviews, authorize county environmental health specialists, investigate complaints of foodborne disease outbreaks, collect unpaid permit fees, and inspect state-owned facilities, as well as work with up to twelve other programs. (These other programs include inspection of meat markets, day care facilities, institutions, tattoo artists, swimming pools, camps, etc.) Currently, all seven regional specialists report directly to the Assistant Section Chief.

The state has responsibility for monitoring environmental health programs at the county level. Therefore, one of the most important functions of the regional specialists is that of program evaluation. Based on data supplied by the Branch (see Table 3), regional specialists average completing only two program evaluations per year. At this rate, it could take up to ten years before program reviews are performed for all counties in a given region. Additionally, as shown by the data in Table 3, regional specialists have limited time for active monitoring of individual county environmental health specialists to ensure they are performing their duties adequately. Interviews with county environmental health directors and specialists, as well as state regional specialists, confirmed that regional specialists do not have adequate time to effectively evaluate the county programs and monitor consistency throughout the state.

TABLE 3 FOOD SANITATION INSPECTION PROGRAM TYPICAL WORK SCHEDULE FOR A REGIONAL ENVIRONMENTAL HEALTH SPECIALIST (REHS)	
(All categories include time for the Food Inspection Program and the other twelve programs the regional specialist is responsible for.)	
Base of 52 weeks/yr @ 5 days/week = 260 workdays/year	DAYS
Evaluations (Includes Travel)	1
Staff Conferences (Includes Travel)	9-12
Quarterly Meetings with County Supervisors	4
District Meetings with Field People (Includes Travel)	6
State Holidays	11
Vacation	25.75
Continuing Education (Includes Travel)	11
Intern Training (Includes Preparation and Travel)	9
Program Evaluations (2/yr. With Travel and Report Writing)	18
Authorizations (9.7/REHS x 3.5-7.5 days/Authorization, Including Travel)	34-73
State Institutions (22.3/REHS x 3 days/institutions includes Travel/Report)	67
Administrative (Comments on Proposed Rules, Travel Reports, Etc.)	24
Planning Meetings and Presentation for Field Staff	4
Mass Gathering Work for the Division	2
Committee Participation (Rulemaking, Form Changing, Etc.)	8
Hearings, Trials, Warrants	4-5
TOTAL	237.75 - 280.75
Source: Department of Environment, Health and Natural Resources	

FINDINGS AND RECOMMENDATIONS (CONTINUED)

RECOMMENDATION

The legislature should fund two additional regional specialists positions at an approximate cost of \$93,000* in salaries and benefits. Once these positions are filled, we recommend that the Branch redistribute the workload to better balance the regions. In order to better coordinate the activities of regional specialists, we suggest establishing one specialist position at a supervisory level. This position's region would need to be smaller to allow time for administrative duties and supervision of the other regional specialists.**

Auditor's Notes:

** All salary costs have been computed using the midpoint of the salary range for the position classification identified.*

*** In conducting the audit, we noted other positions which appear to be misclassified. We recommend the Personnel Division of the Department, with assistance from the Office of State Personnel, perform a classification and organizational review of the Environmental Health Services Section.*

THE PLAN REVIEW FUNCTION IS UNDERSTAFFED.

Title 15A, Subchapter 18A.2607 of the North Carolina Administrative Code requires that plans for food handling establishments that are prototype “franchised” or “chain” facilities be submitted to the Environmental Health Services Section, Division of Environmental Health for review and approval at the state level. The Environmental Engineer in the Food, Lodging, and Institutional Sanitation Branch is responsible for these detailed reviews. The engineer is also responsible for the review and approval of plans for all state-owned facilities that have food preparation areas. Although not required by law, the engineer has been performing courtesy reviews on institutional plans for hospitals, nursing homes, local jails, and schools because of the lack of expertise in most of the counties to perform these reviews. However, due to the increased workload, the state has shifted this function to the county level effective June 6, 1996.

In addition to the review and approval of plans, the Environmental Engineer provides field consultation on facilities, provides training for interns and counties who request assistance and works on other projects. At the time of our review, there was an eight to twelve week waiting period for plans to be reviewed. If additional information was needed or if something in the plan was not approved, the delay could be even longer. During the audit, we learned of complaints from owners and operators concerning the length of time it was taking to have plans reviewed by the Raleigh office. In fact, we learned that there have been instances when restaurants opened before the official plan review was completed.

In the 1994-95 fiscal year, the state office reviewed 478 plans. In the 1995-96 fiscal year, the number of plans reviewed had increased to over 550 plans. Effective January 1, 1996, the Commission for Health Services adopted a rule that requires plans for prototype “franchised”

FINDINGS AND RECOMMENDATIONS (CONTINUED)

or “chain” **lodging** facilities “. . . shall be submitted for review and approval to the Environmental Health Services Section, Division of Environmental Health.” Using information from architects on the number of hotels expected to be constructed in the next year, the state office estimates an additional 200 plans will be submitted for review at the state level as a result of this change.

We contacted programs with structures similar to North Carolina's. In South Carolina, the state staff reviews approximately 500 plans per year with a staff of three. Comparatively, the Metropolitan Davidson County Health Department in Tennessee reviews approximately 275 plans with a staff of one. Using this information, plan reviewers average between 165-275 plans per year. Therefore, in our opinion, the plan review function in North Carolina is understaffed.

RECOMMENDATION

In order to comply with the rules established by the Commission for Health Services concerning plan review, we recommend the addition of two Environmental Engineer positions at an approximate cost of \$101,500 in salaries and benefits. This would bring the plan reviewing staff to three positions. In addition to performing detailed plan reviews in a more timely manner, this would allow the section to provide more training classes, assist the industry in solving problems before construction, and make site visits to ensure that facilities are being constructed in accordance with approved plans.



An alternative to the recommendations for two regional specialists and two environmental engineers would be to add four additional regional specialist positions, making the total number of regional positions eleven. Approximate salary and benefit costs for four regional positions would be \$186,400. The State's responsibility for reviewing and approving prototype “franchised” or “chain” facilities could then be performed by the regional specialists. The Environmental Engineer could assist the regional specialists in reviews, provide continuing education, and perform site visits where necessary. Exhibits 4 and 5 on pages 17 and 18 depict the two alternative organizational structures we have outlined in the foregoing recommendations.

FINDINGS AND RECOMMENDATIONS (CONTINUED)

SOME COUNTIES ARE NOT PERFORMING THE REQUIRED NUMBER OF INSPECTIONS.

The General Statutes specify that restaurants, food stands, mobile food carts, school cafeterias, and other food preparation facilities must be inspected four times each year, or once per quarter. During the 1994-95 fiscal year, we found that only thirty-two counties completed inspections for 100% of food establishments. Sixty-eight counties did not meet their inspection requirement. (See Table 4) One county completed only 2% of the required number of inspections.

TABLE 4 FOOD SANITATION INSPECTION PROGRAM PERCENTAGE OF REQUIRED INSPECTIONS PERFORMED BY COUNTY FISCAL YEAR ENDING JUNE 30, 1995							
COUNTY	%	COUNTY	%	COUNTY	%	COUNTY	%
Alamance	100	Cumberland	100	Johnston	80	Randolph	100
Alexander	39	Currituck	97	Jones	67	Richmond	99
Alleghany	99	Dare	98	Lee	87	Robeson	100
Anson	100	Davidson	99	Lenoir	39	Rockingham	99
Ashe	98	Davie	100	Lincoln	99	Rowan	99
Avery	97	Duplin	75	Macon	100	Rutherford	100
Beaufort	98	Durham	98	Madison	90	Sampson	100
Bertie	100	Edgecombe	95	Martin	100	Scotland	98
Bladen	99	Forsyth	60	McDowell	67	Stanly	100
Brunswick	100	Franklin	99	Mecklenburg	81	Stokes	100
Buncombe	62	Gaston	99	Mitchell	96	Surry	98
Burke	73	Gates	45	Montgomery	100	Swain	100
Cabarrus	100	Graham	100	Moore	99	Transylvania	100
Caldwell	99	Granville	98	Nash	81	Tyrrell	100
Camden	100	Greene	38	New Hanover	99	Union	99
Carteret	61	Guilford	97	Northampton	88	Vance	91
Caswell	59	Halifax	100	Onslow	100	Wake	86
Catawba	99	Harnett	44	Orange	98	Warren	97
Chatham	100	Haywood	99	Pamlico	97	Washington	100
Cherokee	100	Henderson	100	Pasquotank	100	Watauga	99
Chowan	100	Hertford	97	Pender	91	Wayne	100
Clay	36	Hoke	43	Perquimans	100	Wilkes	2
Cleveland	43	Hyde	76	Person	55	Wilson	100
Columbus	99	Iredell	99	Pitt	99	Yadkin	98
Craven	71	Jackson	94	Polk	97	Yancey	99

Source: Department of Environment, Health and Natural Resources

The sixty-eight counties that did not meet the required number averaged completing 83% of inspections. There is an increased risk to the public of a foodborne disease outbreak when inspections are not performed.

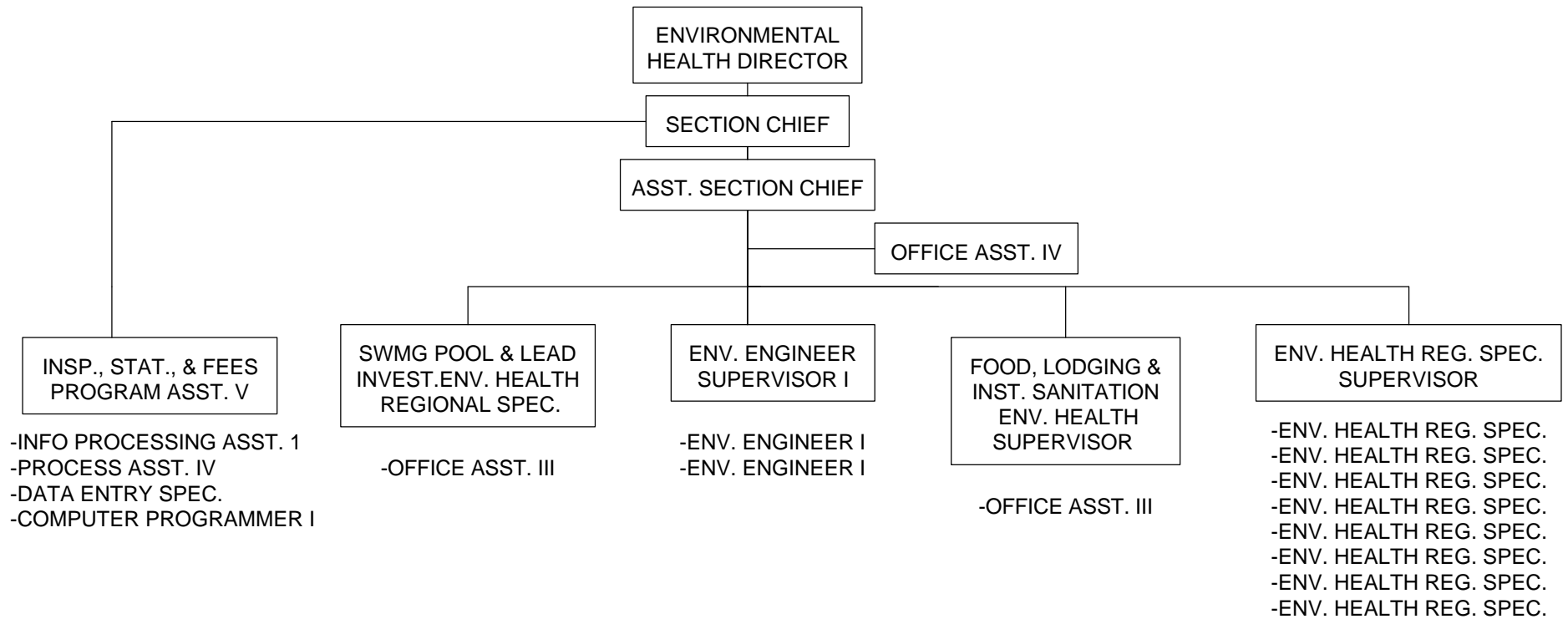
We learned that there are reasons why a county may not meet the required number of inspections. The local environmental health specialist in some counties is responsible for all environmental programs in the county, including food and lodging inspections, lead poisoning investigations, septic tank inspections, and plan reviews. For many counties, a higher emphasis is placed on septic tank inspections since that is tied to growth for the county and additional revenues are generated for the county from the larger fees charged for that type inspection.

EXHIBIT 4
PROPOSED ORGANIZATIONAL STRUCTURE FOR
ENVIRONMENTAL HEALTH SERVICES SECTION

ALTERNATIVE 1

(adds: 2 environmental engineers, 2 regional specialists, and 1 computer programmer)

POSITIONS ARE IDENTIFIED BY WORKING TITLES

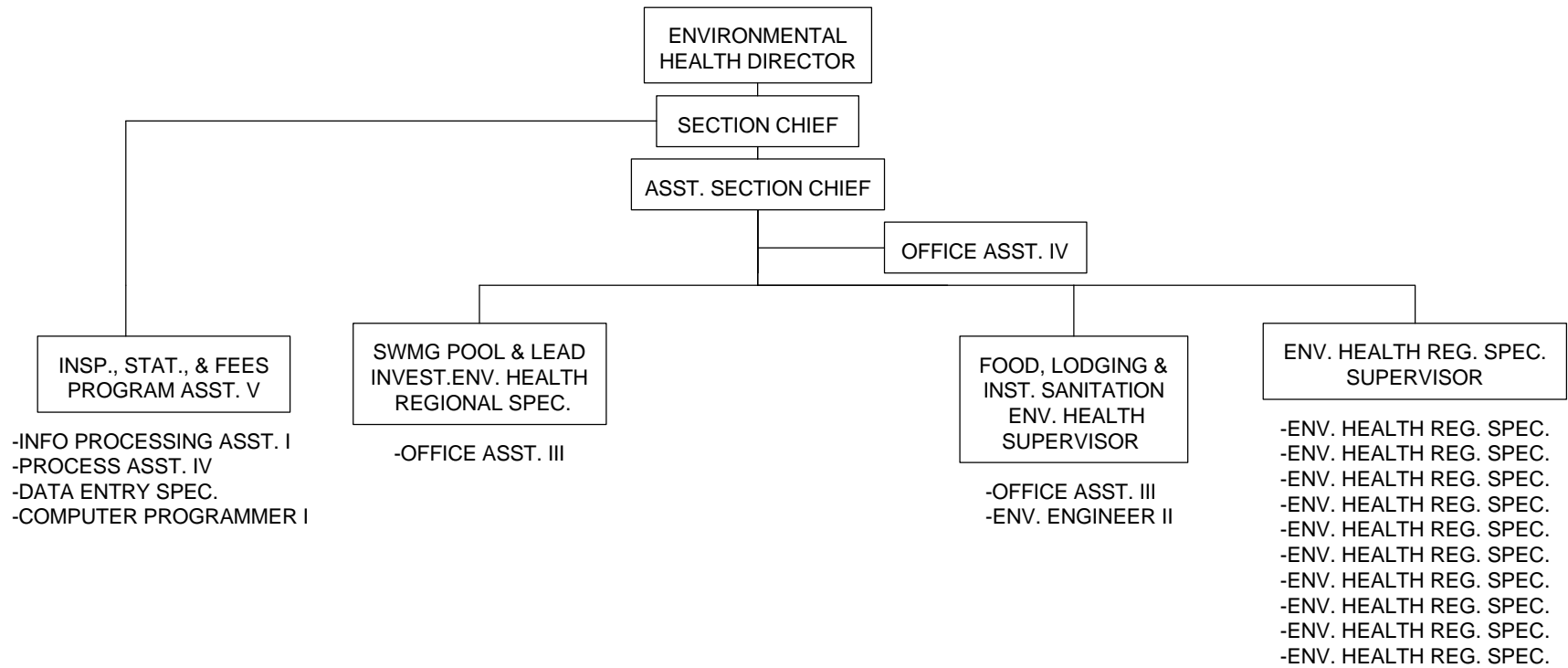


**EXHIBIT 5
PROPOSED ORGANIZATIONAL STRUCTURE FOR
ENVIRONMENTAL HEALTH SERVICES SECTION**

ALTERNATIVE 2

(adds: 4 regional specialists and 1 computer programmer)

POSITIONS ARE IDENTIFIED BY WORKING TITLES



FINDINGS AND RECOMMENDATIONS (CONTINUED)

There are procedures that can be implemented which would allow counties more flexibility in meeting the required number of inspections. Research has shown that the risk of foodborne disease outbreaks is influenced by: the health status of the population served, the extent of preparations of foods, the previous sanitation compliance history, the volume of food served, and the inherent risks in the types of food served. By considering the known risks, the number of inspections for certain facilities could be decreased to ease the burden placed on counties by limited resources and could help increase compliance with General Statutes. Additionally, counties would have a chance of earning more fees; counties performing 100% of required inspections receive an additional allocation of permit fees collected. The State benefits from counties performing all required inspections by the increase in the public trust in the food sanitation inspection program.

RECOMMENDATION

The Branch should determine whether consideration should be given to options which would reduce the number of inspections currently required. Any change should promote the continued quality of the program. Potential options include:

- **reducing the number of school cafeteria inspections from four to three for nine month schools when they do not have summer programs; and/or**
- **reducing the number of required inspections when a facility has had consistently high sanitation scores. The county program would have the flexibility of doing only three inspections instead of four. If the facility received a lower score during any subsequent inspection, the required number of inspections for that facility would be increased back to four.**

Additionally, we recommend that the Branch continue to encourage counties to consider the importance of the food sanitation inspection program to the public health. Smaller counties should be encouraged to form coalitions with other counties and work together to cover all required functions. As encouragement, the state should emphasize the monetary rewards of performing the required number of inspections.

FINDINGS AND RECOMMENDATIONS (CONTINUED)

THE CURRENT FEE STRUCTURE DOES NOT ACT AS A DETERRENT TO LATE PAYMENT.

GS §130A-248 directs the Department to impose an annual permit fee of \$25 on “non-exempt” food establishments. This fee is charged to all food establishments “. . . except nutrition programs for the elderly administered by the Division of Aging of the Department of Human Resources, establishments that prepare and sell meat food products or poultry products, and public school cafeterias.” The statutes further allow the Department to impose a late payment fee of an additional \$25 if the permit fee is not paid within forty-five days of the renewal date. During fiscal year 1994-95, a total of 2,112 fees were delinquent.

Department personnel pursue a delinquent permittee by issuing a “letter of intent to suspend the permit” if the fee plus the late payment fee is not paid within ninety days of the due date. Once the letter of intent to suspend has been issued, the permittee has an additional thirty days to remit payment before the permit is suspended. If an establishment operates without a permit, the state has the right to initiate court action. During fiscal year 1994-95, 364 permits were suspended.

When a permit is suspended, Branch personnel contact the environmental health department of the county in which the establishment is located to request that a local environmental health specialist visit the facility to see if it is still operating. If it is still operating, the Branch notifies the regional environmental health specialist responsible for that county. The Branch also notifies the owner/operator of the establishment that he/she is violating the law. If the fees are not paid immediately upon this notification, the regional environmental health specialist initiates court action. If the case goes to court, the local environmental health specialist, the regional environmental health specialist, and the Branch’s manager of the Inspections, Statistics, and Fees Unit must all appear in court to testify.

Table 5 shows the approximate cost of action at each level of the

TABLE 5 FOOD SANITATION INSPECTION PROGRAM SUSPENSION PROCESS COSTS		
ACTION	COST*	COMMENTS
FIRST INVOICE (45 DAYS)	\$1.81	
SECOND INVOICE (15 DAYS)	1.45	
INTENT TO SUSPEND LETTER (30 DAYS)	3.63	CERTIFIED/RETURN RECEIPT
SUSPENSION OF PERMIT LETTER	2.73	CERTIFIED/RETURN RECEIPT
CALL COUNTY FOR VERIFICATION OF OPERATION	13.53	CALL FROM RALEIGH
COUNTY EHS VISITS FACILITY/VERIFIES IF OPEN AND OPERATING	11.00	
COUNTY EHS CALLS RALEIGH TO REPORT FINDINGS	6.14	
RALEIGH CALLS TO INFORM OWNER THEY ARE VIOLATING LAW	9.53	
CALLS REHS TO INFORM AND ASK TO SWEAR OUT WARRANT	20.06	
REHS GOES TO MAGISTRATE, COMPLETES WARRANT PAPERWORK	208.08	
CALL TO LOCAL JUDICIAL SYSTEM TO SET COURT DATE	9.53	GIVES DISTRICT ATTORNEY BACKGROUND ON CASE
COURT DATE:REHS;COUNTY EHS; MANAGER - FEES ARE ALL PRESENT	578.45	EACH TESTIFIES TO THEIR INVOLVEMENT IN THE CASE
TOTAL	\$865.94	
*All costs include personnel time and are shown in the average.		
Source: Environmental Health Services Section		

suspension process. As shown, it costs the State approximately \$866 to take a permittee to court. *Since these costs are not recovered*, the State has averaged taking only two establishments to court per year for the last five years. Interviews with state and county personnel, as well as restaurant owners, revealed that some owners do not see the fee structure as a deterrent since

FINDINGS AND RECOMMENDATIONS (CONTINUED)

they know they will only have to pay \$50 even if their permit is suspended and they are taken to court.

RECOMMENDATION

Legislation should be changed to increase the late payment penalty to an amount substantial enough to serve as a deterrent to late payment. A reinstatement fee should be charged for establishments whose permits have been suspended. This reinstatement fee should be structured to allow the State to recover the additional costs associated with suspending the permit. A graduated fee schedule should be developed to correlate the reinstatement fee to the additional costs associated with each step of the suspension process.

THE COMPUTERIZED DATA COLLECTION PROJECT HAS NOT ACHIEVED ITS GOALS.

In 1993, the Food, Lodging, and Institutional Sanitation Branch began developing and implementing a computerized data collection system. The project has three main objectives: 1) to collect data on the number of institutions and inspections; 2) to collect data on enforcement actions; and 3) to collect data on specific violations. As of June 30, 1996, project cost has totaled \$106,923, with only the first objective having been accomplished.

The main constraint which has hindered the development of the data collection system is the lack of a programmer dedicated to this effort. The Branch has to rely on departmental programmers as available or contracted programmers. The problem with this is that the Branch usually is not able to get the same programmer each time, and each programmer has a different concept of how to achieve the goals of the project. The Branch also has used contracted programmers. This is a costly option, and there is non-productive time while the new programmer determines where the previous programmer stopped.

Because the Branch was slow in providing counties with a working system, some counties began to develop their own systems. For example, Buncombe County developed a system using Clipper 5.3 software and R & R report writer from Concentric Data Systems. The software costs approximately \$540 and Buncombe County indicated it would share the software with the other counties in the state free of charge. Based on a demonstration we were shown, Buncombe's system is capable of accomplishing all three objectives the state program has established.

Another method of collecting data on the program has been contracting with a private company. Forsyth County has chosen this method and has contracted with Custom Data Processing, Inc. (CDP) from LaGrange, Illinois. CDP's system is in use in eight states across the country. CDP provides a networking system which allows Forsyth County to transmit data electronically to the company's mainframe computer in Illinois. The mainframe processes the data and produces reports that can be requested electronically. The reports are usually

FINDINGS AND RECOMMENDATIONS (CONTINUED)

downloaded to Forsyth the next day. Forsyth can print a hardcopy of data transmitted, and can view the inspection history of an establishment on the computer screen. Interviews with county personnel revealed that the reports generated by CDP are very accurate, but there is some “down-time” or “slow-time” because of problems with telephone lines and demand during peak times. While county management was not able to provide us with specific cost information, they stated that it would probably only be cost effective for larger counties.

Based on data supplied to us during the audit, we believe Buncombe County’s system may be the more efficient, cost effective alternative for accomplishing the objectives of the computerized data collection project.

RECOMMENDATION

The Branch should evaluate the operation of Buncombe’s system. If this program fits the needs of the Branch, it should be copied and distributed to the other counties free of charge. We also recommend that a full-time programmer be hired for the Environmental Health Services Section at an approximate cost of \$39,300 in salary and benefits. This person would be able to work out any “bugs” in the system and serve as a support resource for the counties when the system is distributed. This programmer would also be responsible for modifying programs and troubleshooting problems for all programs under the Environmental Health Services Section. (See Exhibit 4, page 17 for proposed organizational placement.)

THE CENTRALIZED TRAINING PROGRAM IS NOT OPERATING EFFICIENTLY.

The Division of Environmental Health offers “Orientation and Initial Internship Training” classes for new county employees twice per year. The training classes cover such topics as the Public Health Mission and the Principles of Prevention, as well as covering the rules that govern the inspections of restaurants, lodging establishments, swimming pools, tattoo parlors, state institutions, etc. During the training class for the spring of 1996, forty-five contact hours of 216 total hours were dedicated to food sanitation.

A new environmental health specialist is not permitted to conduct inspections until he/she has received training and has been authorized. We found that some counties had new employees on their payrolls for up to four months waiting for the spring class of 1996. It is possible that an employee could have to wait up to six months to be enrolled in a class since the class is only offered twice a year. Additionally, the class is only offered in Raleigh. We noted that the total budget for Orientation and Initial Internship Training for the 1995-96 fiscal year was \$171,667. Of this amount, \$112,000 (65%) was spent for travel and subsistence for students and trainers (regional specialists). For the fiscal year, sixty-nine students attended class at a cost of \$2,488 per student. (Costs for the spring class were \$3,283 per student.)

We contacted the Department of Community Colleges (DCC) to discuss the possibility of community colleges offering the Orientation and Initial Internship Training classes. DCC

FINDINGS AND RECOMMENDATIONS (CONTINUED)

personnel indicated the department was willing to work with the Division to develop and offer courses. All students would be taught from a core curriculum of classes to assure consistency. Also, since environmental health specialists have to pass a standardized exam administered by a professional board, their core knowledge would be verified. The class could be offered at any of the fifty-eight community colleges. DCC requires an enrollment of fifteen students in order to offer a class at any time during the year. Costs are approximately \$35 per student for a community college class. DCC has experience in offering similar types of “core knowledge” programs such as those for nursing and accounting. Classes offered through DCC could also serve as continuing professional education for county environmental health specialists and private industrial hygienists. The Board of Sanitarian Examiners requires fifteen hours of continuing education each year. Travel costs to the state should also be reduced if students don't have to travel as far.

RECOMMENDATION

The Division of Environmental Health should work with DCC to explore the possibilities of offering the Orientation and Initial Internship Training classes at local community colleges. The Division would need to provide a coordinator to ensure that the classes are taught as designed and to ensure that any new rule changes/interpretations are incorporated into the curriculum. The classes could be offered to all qualified citizens as well as newly hired employees in county environmental health departments. These classes could also be offered as continuing professional education for environmental health specialists and industrial hygienists.

THERE ARE NOT ADEQUATE INTERNAL CONTROLS OVER THE SANITATION GRADE CARDS.

Sanitation grade cards are posted in facilities to display sanitation grades to the public. The cards indicate the inspection date, the inspector's name, and alphabetical and numeric grades. During our review we observed that these sanitation grade cards are not pre-numbered. The grade cards are an important part of the sanitation program's checks and balances and should be carefully accounted for in order to prevent misuse. In visiting restaurants across North Carolina, we found instances where the restaurant was displaying blank “Grade A” cards. An explanation offered by local environmental health specialists for a blank card was that the ink on the card had faded from sunlight. Another possible explanation is that the unused side of the double sided grade card was mistakenly posted. (Currently, the Grade “A” cards are printed on both the front and back.) The local environmental health specialists receive batches of cards from the Raleigh Office. In the event they run out of cards, they can obtain additional cards from another county. Without accounting for the cards, individuals could obtain unused cards and post a higher sanitation grade than the actual sanitation of the facility warrants, thereby misleading the public.

FINDINGS AND RECOMMENDATIONS (CONTINUED)

RECOMMENDATION

The Branch should begin using pre-numbered grade cards and account for the issuance of batches of these cards to the counties. Further, the local environmental health specialists should write the scores and sign the cards with indelible ink to prevent fading or possible alteration.

APPENDIX A

State of North Carolina
Department of Environment
and Natural Resources
Division of Air Quality

100 North Salisbury Street
Raleigh, NC 27603
919.719.2200



MEMORANDUM

MEMORANDUM

To: [Redacted]
From: [Redacted]
Subject: [Redacted]

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]



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Note: Auditee's response was electronically scanned and reformatted for inclusion in the report. No changes were made to the context of the response, however.

**RECOMMENDATIONS TO THE FOOD, LODGING AND INSTITUTIONAL
SANITATION BRANCH PERFORMANCE AUDIT**

RECOMMENDATION #1

**THE FOOD, LODGING AND INSTITUTIONAL SANITATION BRANCH IS NOT
ADEQUATELY STAFFED.**

The Food, Lodging and Institutional Sanitation Branch is charged with managing three important programs through local health departments. Food safety, the largest program within the Branch, has grown in importance due to the growth in the state and the movement of busy families to eating out more often. There are as many food service establishments in North Carolina today as there were food, lodging AND institutional establishments 10 years ago. The growth in restaurants from 1986 to 1996 is 46 % and, in take-out establishments, 97%. The state staff size, in the meantime, has shrunk.

Timeliness is no longer an option available from the state agency: Plans take at least 8 weeks to review, letters take months to answer and obtaining a regional specialist to moderate a disagreement between industry and a local county can easily take a month. At the present time, several sets of institutional rules have not had a complete review in 20 years.

In recent decades, food safety has grown in prominence due to emergence of new pathogens, changes in lifestyles, and the high consequences and costs of illness. The US Food and Drug Administration estimates that 10% of Americans suffer from some form of a food-borne illness each year. The costs of verified outbreaks have risen to over \$1,000 per person per outbreak. **Refer to Exhibit I for information on food-borne diseases and their consequences.**

To manage food safety effectively and efficiently, the Branch must be able to lead, plan, control, make decisions, organize, staff, communicate and motivate local health agencies and local environmental health specialists who are not employees of the state. However, with the current staff size, speeches and training sessions have been reduced, hamstringing our ability to lead. Planning is sporadic, as time constraints have reduced us to being more reactionary. Monitoring of local health department staff is almost non-existent. Decision making is hampered due to an inability to expend the needed research time. Communication is hampered, as everyone is occupied putting out fires (handling urgent needs). Motivation is a major problem as staff morale is low due to the high workloads and resultant high pressure. Only 9 staff members handle all aspects of the Food, Lodging and Institutional programs. Two of these people are in the main office, 7 are in the field. While food service establishments form the bulk (2/3) of the number of facilities under inspection, the demands of the other programs on staff time cannot be ignored. Lodging establishments are currently the fastest growing group, taking up, proportionately, a larger amount of plan review time. Institutions take up more of the regional specialists' time, due to the complex and sensitive problems of dealing with a population highly susceptible to disease.

APPENDIX A (CONTINUED)

In the past ten years, the state staff has shrunk, both in actuality and in terms of their ability to provide coverage, as new establishments and new local staff, needing authorization and guidance, have been added.

The following table (Table I) of our sister states shows some comparative data on program size and staffing:

TABLE I
COMPARISON OF STATE STAFFING LEVELS FOR NORTH CAROLINA AND
ADJOINING STATES

State	Number of Food service Establishments (Rounded)	Total Number Of Establishmts. Covered by Same Staff	Number Of Regional Supervisors	Number Of State Office Staff
North Carolina	22,000	33,000	7	2
South Carolina	15,000	18,000 (est.)	10	7
Tennessee	18,000	28,000	8	8
Virginia	22,000	28,000	35	4

We believe this table clearly shows the need for more staffing at the state level in North Carolina's Food, Lodging and Institutional Sanitation Branch.

Regional Staff

We agree with the problems of supervision of local health departments described on pages 6 and 7. In previous decades, Regional Environmental Health Specialists were able to assist in routine training of all new local environmental health specialists, by actively working with them in the field during their first year of work. Additionally, regional staff were able to spend time with local staff, observing application of state laws and rules. As the number of Regional Environmental Health Specialists declined, the number of local staff increased, and the scope of regional duties enlarged, these activities have been eliminated. Growth has gradually eroded away these two important management tools. The state agency, while charged with monitoring local health department implementation of State Laws and Rules, is unable to be effective due to manpower shortages.

APPENDIX A (CONTINUED)

Regional Environmental Health Specialists must authorize all local environmental health specialists to carry out the state food program (approximately 50 local people per year). The authority to inspect food service establishments is delegated to the Secretary of the Department of Environment, Health and Natural Resources (G.S. 130-5(4)). The Secretary, in turns, delegates it to his/her staff and the staff delegates this authority to the local environmental health specialists after a period of education and field experience. Regional staff delegate authority to inspect food, lodging and institutional establishments to a local environmental health specialist after working together performing routine inspections. The regional person judges observational skills and ability to apply the rules and mark violations correctly. At the end of that time, the regional specialist may pass the individual, recommend they receive further training or not pass them. These procedures are currently being studied by a committee. Recommendations are for more structure in the authorization process, with written examination. In short, the authorization process is expected to occupy more time in the REHS schedule.

The auditor's office has recommended an insufficient number of REHS. If we are to rely on the program evaluation as a principle control tool in managing county program continuity, we must perform county program evaluations every 2-3 years. The auditors recommendation is insufficient to benefit the outcome expected in the program. The following table is a variation of Table 4 in the auditor's report (page 13). It notes that certain duties will remain a fixed number of days per person regardless of the number of people (for example, all Regional Staff would continue to have a quarterly training day for supervisors in their area, so each REHS would continue to show 4 days per year for this activity regardless of the number of REHS). Other duties would require fewer days per person as the number of REHS increased (such as the number of authorizations). The following table takes these "extra" days from variable activities and allots them to program evaluations and monitoring "routine" days of operation in local counties.

APPENDIX A (CONTINUED)

TABLE II

**FOOD SANITATION INSPECTION PROGRAM
ESTIMATED WORK SCHEDULE FOR A REGIONAL ENVIRONMENTAL HEALTH
SPECIALIST (REHS) ASSUMING 8 REHS**

Work plan evaluations (WPPR).....	1 day
Staff Conferences (includes travel).....	9-12
Quarterly meetings with County Supervisors.....	4
District Meetings with Field People (includes travel).....	5
State Holidays.....	11
Vacation.....	25.75
Continuing Education (includes travel).....	11
Intern Training (including preparation and travel).....	8
Program Evaluation (2/yr with travel and report writing).....	18*
Authorizations (8/REHS x 3.5-7.5 days).....	28-60
State Institutions (18.5/REHS x 3 days per institution).....	55.5
Administrative.....	24
Planning Meetings and Presentations for Field Staff.....	3.5
Mass Gathering Work.....	2
Committee Participation.....	4-5
Hearing, Trials, Warrants.....	4
TOTAL	213.75--249.75 days

This will leave 10.25 to 46.25 days per REHS per year for supervision of counties during average workdays and assisting in the in-field training of new local specialists.

*Note that the addition of one REHS and 1 Supervisor will only increase the review of local programs from 14 to 17 reviews per year. (In actuality, the existing 7 REHS accomplished only 6 Program Evaluations in the past year.)

APPENDIX A (CONTINUED)

The addition of only one full-time field regional specialist still leaves little time for monitoring of local health departments. Adding a third non-supervisory REHS (total of 9 REHS and 1 supervisor) would increase the number of monitoring days from 88 to 152 days per year, allowing each REHS to increase the number of program evaluations to six per year (allowing coverage of all local health department programs every 3 years) with 52 to 126 days additionally for assisting with field training of local staff and monitoring of routine county activities.

A new duty also looms on the horizon for Regional Environmental Health Specialists. The Department is currently being requested by industry representatives to establish a system of informal hearings, utilizing the REHS as hearing officers and necessitating written findings. The representatives note that the current hearing system is too expensive for them to utilize it for minor disputes. If this request is to be filled, more REHS must be made available for travel and hearings.

It is estimated an additional 6 Regional Environmental Health Specialists are necessary to provide the program quality expected from the North Carolina Restaurant Association.

RECOMMENDATION #2

The Plan Review Function Is Understaffed

The audit office suggests the addition of only two engineers. We would argue for more. We are expecting some 800 plans to be submitted in Fiscal Year 1996-97, placing the proposed staff at a high number of reviews from the very beginning. We are also aware that some plans that should come to the state office are being submitted to the counties due to the time lag at the state office. If new reviewers are hired for the main office, some of these plans will be pulled back from the counties and be submitted to the state office. Therefore, we may well receive in excess of 800 plans. South Carolina's plan review system is hailed by the U.S. Food and Drug Administration as a model in the southeastern states. South Carolina uses centralized plan review and is staffed at one engineer per 165 plans. North Carolina's growth is expected to continue. **Therefore, we recommend no less than 3 additional plan reviewers.** Note, not all reviewers need to be engineers. Some aspects of plan review can be handled by experienced environmental health specialists. A cost benefit could be achieved by adding 2 engineers and 2 environmental health specialists.

One possibility of funding those positions is a plan review fee. This is a common practice in many states. Plan review fees range in the amount of **\$75.00 to \$600.00** per plan.

APPENDIX A (CONTINUED)

Another Audit Report recommendation was to send food service establishment plans to Regional Specialists. We strongly disagree with that recommendation. People who review plans and examine construction on a full time basis are much more conversant with construction materials and methods, and are able to catch problems in formative stages. As we have seen previously, the REHS time is allocated in many directions. They cannot perform the present tasks at an adequate level and other new tasks are contemplated for them. The addition of any new task necessitates a learning curve, slowing response times and giving less accurate and less consistent answers. Specialists under the direction of the head plan reviewer will ensure that plans are reviewed quickly, consistently from person to person and with expertise.

Management Support Personnel

The audit report has not discussed additional management support personnel, but they will also be needed. One management support position, with assistance from two others in the section, now supports the one plan review engineer and the Branch Head. In the ten years that this position has been in place, rule formatting has become increasingly complex and the quantity of plan review letters has tripled. **New Central Office professional staff should be supported by the addition of one management support post. In addition, a management support position should be added for budget and rule-making duties alone.** This Branch works with 10 sets of rules, so rules making duties are extensive and changes are frequent. With the additional staff will come additional reports that need typing, copies that must be made, travel vouchers, time sheets and other supportive paperwork that must be typed, filed, faxed or copied.

RECOMMENDATION #3

Some Counties are not Performing the Required Number of Inspections

Many county health departments are understaffed also. State programs in adjoining states (Virginia, South Carolina, Tennessee) have mandated inspection frequencies of once to twice per year and have no consultative time available for additional visits, other than to follow up on violative actions. As an example, Virginia, with a similar number of establishments, has 250 field inspectors, but has a mandatory frequency of inspection of once per year, compared to North Carolina's quarterly inspection.

There is some suggestion to utilize the financial incentives (page 16) to encourage counties to perform the required inspections. The monetary rewards have dimmed as time has passed, as the monies are small. It is a fallacy to think there is a monetary reward for performing the required number of inspections under the present program. The county receives very little FOR doing the inspections and LOSES NOTHING for not completing the inspections. Regardless of their performance, the county will receive \$6,000 annually to assist them in performing ALL their environmental health activities. Of the food and lodging fee charged to

APPENDIX A (CONTINUED)

each restaurant (\$25 per year), 2/3 of that (\$16.65) is allocated to the counties. In distributing this "county fund", each county gets \$750 regardless of the level of inspections. In a second distribution, the county receives funds according to the percentage of required inspections it completes. Finally, the leftover monies from counties who did not meet 100%, is divided up among those counties that did complete 100%. Even the largest county does not receive enough money from their food and lodging fee distribution to pay the salary of a full-time environmental health specialist. On the other hand, nothing is held back on counties who fail to complete their inspections, whether they have a staff shortage or just decided to put their food staff on other duty. The state agency is working with counties who complete less than 50% of their required inspections to develop improvement plans. Currently, some counties are mandated by their commissioners to hire no new staff or to hire staff only if the local department can generate enough funds to pay for the new hire. Therefore, the food program suffers. This is in contrast to other environmental health programs where each county is allowed to set their own fee schedule and fees are collected in amounts that support or partially support the program staff. Some possible alternatives may be:

1. Appropriation of a "supplement" to counties for the hiring of environmental health specialists who are full-time food, lodging and institutional sanitation specialists. In this manner, the state legislature would be contributing to the salary base of non-sewage specialists. (Sewage and well programs generally have much larger fees associated with them.)
2. Raising the current food and lodging fee and continuing the 1/3--2/3 distribution, with an additional requirement that the money allocated to the county only be used in food, lodging and institutional sanitation programs. (Currently, it can be used for ANY environmental health program.) This would raise more funds for the county to support more people in the field and more funds for the Inspections, Statistics and Fees unit to support the program they need.
3. Re-allocating the number of inspections required by developing a frequency of inspection based on risk associated with the operation. As the risk level increases, more frequent inspections would be required. At lower risk levels, fewer inspections would be required. This possibility of inspection re-allocation seems to be the best alternative for improving the percentage of inspections completed and increase food protection levels for public health. This type of program does allocate resources to the areas that need it most. It will take 3/4 of the time spent inspecting each bar and hot dog stand and allocate that time to day cares, schools, nursing homes, full-service restaurants and other higher risk establishments. Such programs have been talked about in the literature, since the 70's and have been in use in other states. The US Food and Drug Administration in their 1993 Food Code, have advocated a risk-based inspection frequency scheme. This will necessitate a change in legislation but the cost effectiveness of this form of inspection assignments is more appropriate.

APPENDIX A (CONTINUED)

RECOMMENDATION #4

The Current Fee Structure Does Not Act As A Deterrent To Late Payment

We agree with setting the late payment fee at a level that at least pays for the cost of collection. It is fair to the tax payer and the fee payers who make an effort to respond within the deadline. Both parties would prefer that staff time be spent in looking at problems in food service establishments rather than sitting in court.

RECOMMENDATION #5

The Computerized Data Collection Project Has Not Achieved Its Goal

We agree with the recommendation this program needs a full-time programmer. However the amount recommended of \$39,300.00 for salary and benefits would only be enough for an entry level programmer. It is recommended that the salary level be increased to allow hiring of a full-time programmer at mid-range salary level.

RECOMMENDATION #6

The Centralized Training Program Is Not Operating Efficiently

The recommendation to decentralize training is directly opposed to the goals (strongly supported by the North Carolina Restaurant Association) to increase consistency. Unless the same instructors are used in each Community College and State Staff instructs each class, the information transferred will be inconsistent lack practical experience. For the State staff to instruct at multiple training sites would totally drain our limited resources and be impractical. State travel costs would exceed the costs now incurred In addition, students would still be required to travel to community College sites where overnight expenses may be even higher than the group rates negotiated in Raleigh. We strongly object to this section being included in the audit report and to this recommendation in particular.

RECOMMENDATION #7

There Are Not Adequate Internal Controls Over The Sanitation Grade Cards

We partially disagree with this recommendation. The recommendation to number and track grade cards may require additional clerical staff at the State and County level if implemented. The Counties should use indelible ink. This no cost step might eliminate most of the perception of a control problem identified by the audit without going to the cumbersome numbering system for grade cards.

EXHIBIT 1

A. Public Health Impact of Food Sanitation

1. Number of People Affected Annually: 81 million

2. Effects on The Public - Mild to Death

Handout pages 65-82 of "Procedures to Investigate Foodborne Illness"

The traditional form of foodborne illnesses is thought of as an acute but short-lived diarrheal disease. Many people still believe this, causing them to consider food safety a "back-seat" public health program. However, there are serious consequences to many types and cases of foodborne illness.

The very old, very young and those with chronic illnesses are most affected by all diseases. In addition, deadly pathogens, attacking these and other specific subsections of the population, have been recognized. Each year, approximately 3.6 million pregnant women and their 3.6 million fetuses are susceptible to Listeria infection. About 300,000 graft recipients and cancer patients undergoing treatment are at risk for this and many other foodborne illnesses. Add in alcoholics; cirrhotics, IRV positives, persons on hemodialysis, diabetics, heart patients, and others with underlying diseases and we recognize that a large portion of Americans can suffer death or disability from foodborne illness. We are, in America, an aging population. As we continue to age, the percentage of people with chronic health problems will continue to rise.

3. Diseases and Severity

a. Deadly Diseases

Botulism - with good diagnosis <15% fatality rate

b. Vibrio vulnificus - if treatment is obtained within 24 hours of symptom onset, 25% fatality; delayed 72 hours, 100% fatality.

c. Listeriosis - Cause of the highest fatality outbreak in modern foodborne disease history.

d. Escherichia coli 0157:H7 - Particularly deadly to the old, young and incorrectly diagnosed.

APPENDIX A (CONTINUED)

Public Health Impact of Food Sanitation

- e. Cholera - Untreated case fatality rate > 50%; treated < 2%.
- f. Poisonous plants, fish and pesticides

3.1 Permanent Changes

- a. Botulism
- b. Paralytic shellfish poisoning
- c. Yersiniosis - Mimics appendicitis
- e. Campylobacteriosis - Failure-to-Thrive
- f. E. coli 0157:H7 - Kidney damage; neural damage
- g. Giardiasis - Chronic cases cause nutritional insufficiency
- h. Typhoid Fever
- i. Strep Throat
- j. Trichinosis
- k. Toxoplasmosis
- l. Ciguatera Toxin

3.2 Long-term Changes (≤ year)

- a. Salmonellosis
- b. Giardiasis
- c. Brainerd's Diarrhea
- e. Tapeworms
- f. Shigellosis
- g. Hepatitis A
- h. Brucellosis

3.3 Asymptomatic Carriers - Capable of spreading the disease to others

- a. Salmonellosis (including Typhoid Fever)
- b. Shigellosis
- c. Giardiasis
- e. Worms (Anisakidasis, Tapeworms, etc.)
- f. Cryptosporidiosis
- g. Toxoplasmosis

3.4 Severe Debilitating Illnesses Requiring Hospitalization

- a. Hepatitis
- b. Botulism
- c. Escherichia coli 0157:H7
- d. Vibrio vulnificus
- e. Listeriosis
- f. Cholera
- g. Yersinosis
- h. Campylobacteriosis
- i. Salmonellosis
- j. Giardiasis
- k. Trichinosis
- l. Shigellosis
- m. Ciguatera poisoning

3.5. Severe Short Term Messes

- a. Histamine Poisoning
- b. Norwalk or SRSV infection
- c. Yersinosis
- d. Clostridium perfringens
- e. Bacillus cereus
- f. Sodium hydroxide poisoning
- g. Diarrhetic shellfish poisoning
- h. Stapyloccocal intoxication

3.6 Mild Illness

(Most of the above)

4. Foodborne Illness as a Trigger for Chronic Disorders.

Illness and even death are the expected outcomes of infection, but pathogens associated with foods are capable of serving as environmental triggers of certain chronic disorders.

a. Joint Diseases (autoimmune reactions)

- A. Yersinia
- B. Salmonella
- C. Shigella
- D. Campylobacter
- E. Escherichia coli
- F. Klebsiella pneumoniae

Appears to be genetically associated

About 1-2% of persons infected will develop reactive arthritis as a consequence of infection with one of these "diarrheal" organisms.

b. Thyroid Diseases

Persons with Graves Disease often exhibit a high titer to Yersinia enterocolitica. Thyroid stimulating binding sites are present on Y. enterocolitica and are recognized by immunoglobulins from Graves patients.

c. Neuromuscular Disorders

Guillain-Barre' syndrome, characterized by weakness and respiratory insufficiency is a known sequella to Campylobacteriosis.

d. Nutritional Disturbances

Even short duration diarrhea can cause subtle changes in our immunologic systems. Also, pathogens, by altering the gut wall, can allow entry into the body of substances normally excluded.

Failure-to-Thrive, noted in infants, is associated with the long term diarrheal effects of Campylobacter infection.

e. Renal Diseases

Hemolytic Uremic Syndrome-E. coli and Shigella infections.

5. Costs of An Outbreak

- a. To the victim
 - Medical
 - Doctor
 - Medicines
 - Hospitalization
 - Transportation
 - Lost wages
 - Pain and suffering

- b. To their employer
 - Lost productivity

- c. To the public sector
 - Investigation
 - Testing
 - Training of industry
 - Education of public
 - Any prophylactic medications

- d. To industry
 - Staff excluded from work
 - Food destroyed
 - Loss of profit
 - Closure
 - Media exposure
 - Modification of physical plant or procedures
 - Staff training
 - Civil suits
 - Loss of public confidence
 - Increased advertising
 - Bankruptcy

Example: 1 outbreak of *S. typhimurium* in a hospital cafeteria caused 89 hospital staff to be ill, losing almost 900 days away from work (500 days hospitalization).

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September 23, 1996

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