

Conducting a Risk Factor Study: Purpose and Objectives



Maricopa County Environmental Services Department, Arizona



- 2001 - adopted the 1999 FDA Model Food Code updating it's 1976 Food Code.
- Changed approach in food safety inspections with greater focus on risk factor violations.
- 2002 – enrolled in the FDA Voluntary Retail Regulatory Program Standards.
- 2003 – conducted first Risk Factor Survey and Self Assessment



The 6th largest County in the US with a population of 4 million +

Entertains up to 4 million guests per year

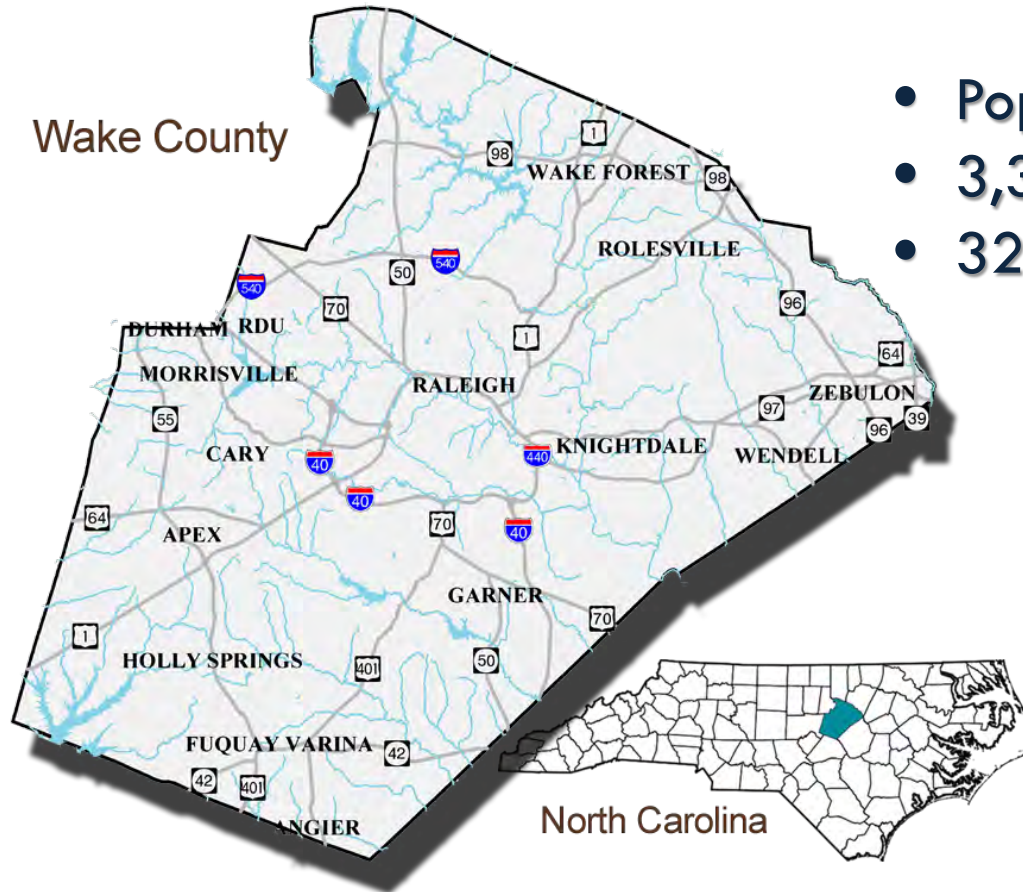
We have 19,046 food permits and conducted 55,355 inspections last year

Governed by a County Manager and a Board of Supervisors

Environmental Services Department, 1 Director, 5 Divisions

Environmental Health Division: 1 Division Manager, 5 Managers, 18 supervisors, and 90 field inspectors

Wake County, North Carolina



- Population = 1 million
- 3,300 food service facilities
- 32 FTEs



Foodborne Illness Risk Factors

- **The Centers for Disease Control (CDC) estimates that each year thank one of six Americans (48 million people) get sick, 128,000 are hospitalized, and 3000 die of foodborne illnesses. (2011 data)**
- **The top five risk factors:**
 - **Food from unsafe sources**
 - **Inadequate cooking**
 - **Improper holding temperatures**
 - **Contaminated equipment**
 - **Poor personal hygiene**



Risk Factor Survey Form

PTM #3 - Risk Factor - Improper Holding / Time and Temperature Risk (Items 5-8)

+

IN	OUT	NO	NA	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5. Foods requiring refrigeration are held at the proper temperature

IN	OUT	NO	NA	Description of Cold Holding Temperature OBSERVATIONS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	A. TCS Food is maintained at 41°F (5°C) or below, except during preparation, cooking, cooling, or when time is used as a public health control
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Raw shell eggs are stored under refrigeration that maintains ambient air temperature of 45°F (7°C) or less
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C. Other (describe in the temperature chart and comments section below)

COMMENTS:

Cold Holding Temperatures Recorded During the Data Collection (List all temperatures taken)

FOOD PRODUCT	FOOD TEMP.	FOOD CODE CRITICAL LIMIT	TYPE OF COLD HOLDING EQUIPMENT	FOOD PRODUCT	FOOD TEMP.	FOOD CODE CRITICAL LIMIT	TYPE OF COLD HOLDING EQUIPMENT

NUMBER OF FOOD PRODUCT TEMPERATURES	SUMMARY COLD HOLDING PRODUCT TEMPERATURE CATEGORIES
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<input type="checkbox"/>	I. - Number of product temperature measurements IN Compliance with <i>Food Code</i> critical limits
<input type="checkbox"/>	II. - Number of OUT of Compliance product temperature measurements 1°F - 2°F above <i>Food Code</i> critical limits
<input type="checkbox"/>	III. - Number of OUT of Compliance product temperature measurements 3°F - 4°F above <i>Food Code</i> critical limits
<input type="checkbox"/>	IV. - Number of OUT of Compliance product temperature measurements 5°F - 9°F above <i>Food Code</i> critical limits
<input type="checkbox"/>	V. - Number of OUT of Compliance product temperature measurements 10°F or more above <i>Food Code</i> critical limits

Risk Factor Survey Form

PTM #1 - Risk Factor - Poor Personal Hygiene (Items 1&2)

IN	OUT	NO	N	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1. Employees practice proper handwashing
IN	OUT	NO	N	Description of HANDWASHING OBSERVATIONS
<input type="checkbox"/>	<input type="checkbox"/>			A. Hands are cleaned and properly washed using hand cleanser / water supply / appropriate drying methods / length of time as specified in Section 2-301.12 of the <i>Food Code</i>
<input type="checkbox"/>	<input type="checkbox"/>			B. Hands are cleaned and washed when required as specified in Section 2-301.14 of the <i>Food Code</i>
COMMENTS: _____				
HANDWASHING FREQUENCY ASSESSMENT				
	<u>C1</u> Employee observed washing hands properly and when required	<u>C2</u> Employee observed washing hands improperly	<u>C3</u> Employee observed failing to wash hand when required	
TOTAL COUNT	_____	_____	_____	
FOOD SAFETY MANAGEMENT SYSTEM ASSESSMENT				
PROCEDURES		TRAINING		MONITORING
<input type="checkbox"/>	1	<input type="checkbox"/>	1	<input type="checkbox"/>
<input type="checkbox"/>	2	<input type="checkbox"/>	2	<input type="checkbox"/>
COMMENTS: _____		COMMENTS: _____		COMMENTS: _____

Program outcomes vs. outputs



Program outcomes vs. outputs

- Maricopa County currently is at 1 FTE per 701 inspections.
- Wake County is currently at 1 FTE per 550 inspections.
- Voluntary Standard #8 suggests 1 FTE per 280-320 inspections.

Determine food safety practices in most need of attention

- **Identify priority items – gaps are opportunities**
- **Assess resources to address priority items**
- **Consider early successes**
- **Document any actions you take (intervention strategies)**

Helps establish priorities and intervention strategies to reduce RFs

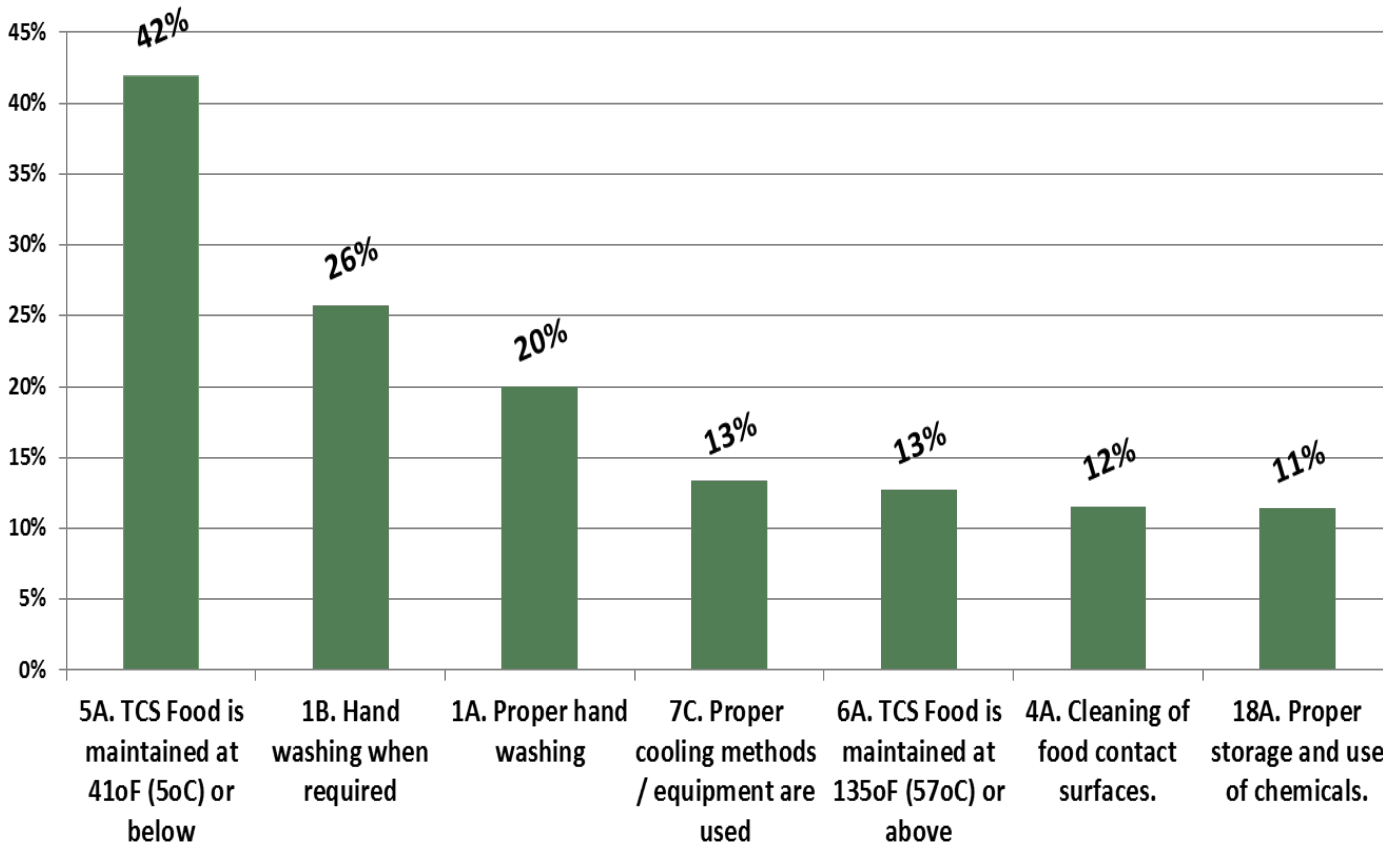
- **Cold Holding**
- **Handwashing**
- **Cooling**
- **Employee health**
- **Datemarking**



Maricopa County 2015-2016 Risk Factor Survey Overview

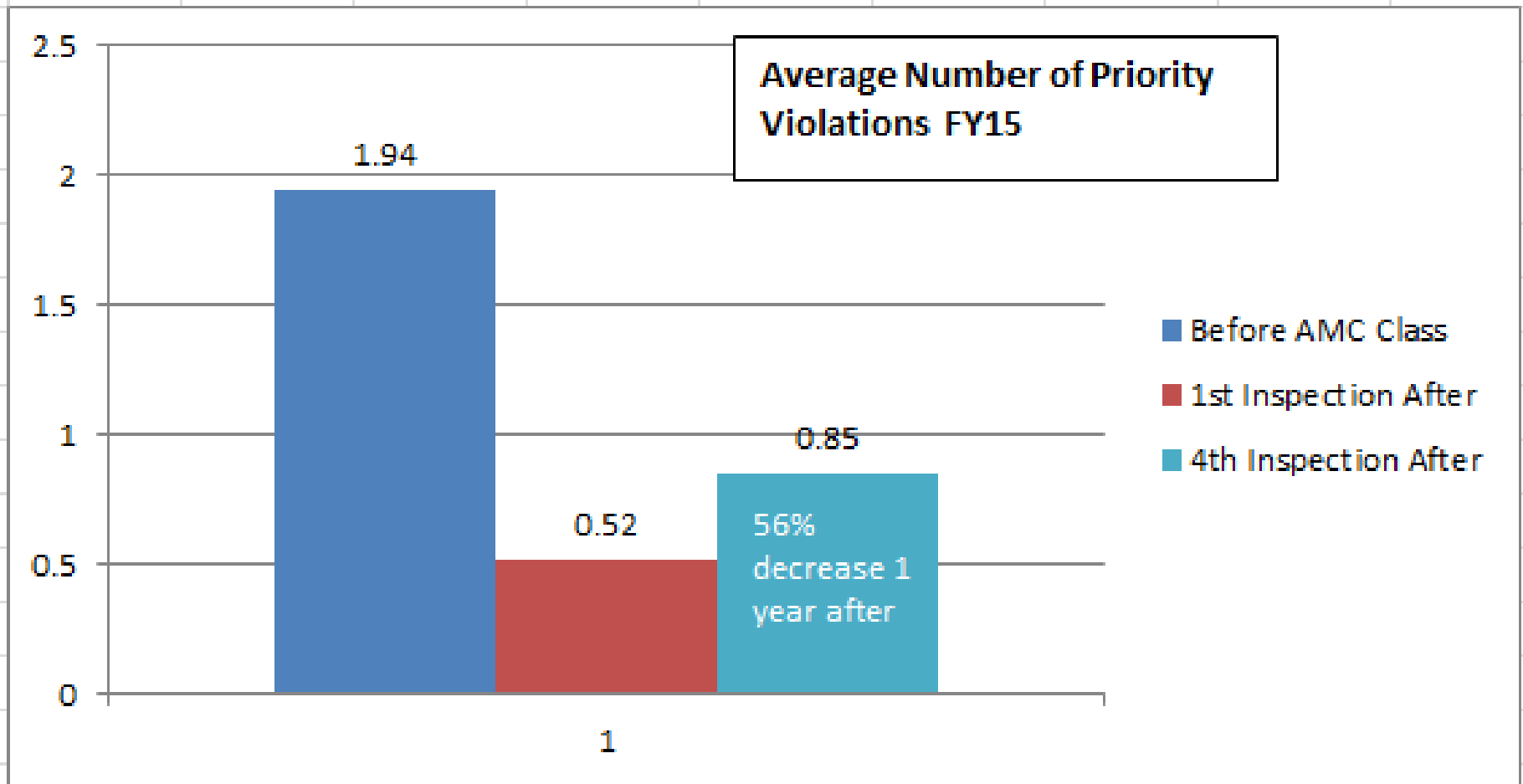


Percentage of Out Violations for All Establishments





Maricopa County Active Managerial Control Class Results





Maricopa County Current Resources



Proper Food Storage in Cold Holding Units

*When cooling foods, either an approved walk-in or the ice bath method must be used. Foods must be cooled from 135°F to 70°F with-in 2 hours and from 70°F to 41°F in 4 hours, for a total time of 6 hours.



*Foods That Are Being Cooled, Reduced to 4 Inches or Less & Uncovered



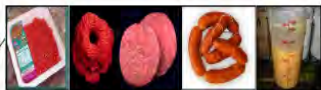
Ready-to-Eat Potentially Hazardous Foods, Date Marked & Covered



Washed Fruits & Vegetables



Storage of Raw Pork, Beef, Seafood & Whole Eggs



Storage of Raw Ground Meats & Pooled Eggs



Storage of Raw Chicken/Poultry

Maricopa County

Environmental Services Department

MARICOPA COUNTY
Environmental Services Department

<p>Requerimientos de Temperaturas</p> <p>Para la protección de alimentos Potencialmente Peligrosos</p> <table border="0" style="width: 100%;"> <tr> <td>Carne</td> <td>Tomate</td> </tr> <tr> <td>Pollo</td> <td>Rebanado</td> </tr> <tr> <td>Pescado</td> <td>y Picado /</td> </tr> <tr> <td>Huevos</td> <td>Lechugas</td> </tr> <tr> <td>Leche</td> <td>Cortadas</td> </tr> </table>	Carne	Tomate	Pollo	Rebanado	Pescado	y Picado /	Huevos	Lechugas	Leche	Cortadas	<p>Temperature Requirements</p> <p>For protection of potentially hazardous foods / Time temperature control for safety food</p> <table border="0" style="width: 100%;"> <tr> <td>Meat</td> <td>Cut / diced</td> </tr> <tr> <td>Poultry</td> <td>Tomatoes</td> </tr> <tr> <td>Fish</td> <td></td> </tr> <tr> <td>Eggs</td> <td>Cut Leafy</td> </tr> <tr> <td>Milk</td> <td>Greens</td> </tr> </table>	Meat	Cut / diced	Poultry	Tomatoes	Fish		Eggs	Cut Leafy	Milk	Greens
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Cocine Pollo y pavo a 165°F Recaliente alimentos a 165°F

Cocine carne molida a 155°F

Cocine carne y pescado a 145°F

Mantenga alimentos calientes a más de 135°F

Mantenga los alimentos fríos a menos de 41°F

Cook poultry to 165°F Reheat foods to 165°F

Cook ground meat to 155°F

Cook non-ground meat and sea food to 145°F

Keep hot foods above 135°F

Keep cold foods below 41°F

*Refrigeration equipment must maintain food below 41°F

MARICOPA COUNTY AZ

I Want To...
Services
Residents
Business
Government

- Home - ESD
- Active Managerial Control
- Administrative Change Request Form
- Cutting Edge Program
- Fee Waivers
- Food Safety/Operator Resources
- Food Employees
- Get Involved - ESD
- Pay Fees
- Permitting & Approvals
- Report a Concern
- Restaurant Ratings
- Request A Record

Food Safety Forms

Active Managerial Control (AMC) Guidance Document

AMC Guidance [English \(PDF\)](#) [Spanish \(PDF\)](#) [Chinese \(PDF\)](#)

AMC Policy Templates

Cold Holding	English (PDF)	Spanish (PDF)	Chinese (PDF)
Cooking	English (PDF)	Spanish (PDF)	Chinese (PDF)
Cooling	English (PDF)	Spanish (PDF)	Chinese (PDF)
Cross Contamination	English (PDF)	Spanish (PDF)	Chinese (PDF)
Employee Health	English (PDF)	Spanish (PDF)	Chinese (PDF)
Food Contact Surfaces	English (PDF)	Spanish (PDF)	Chinese (PDF)
Food Source	English (PDF)	Spanish (PDF)	Chinese (PDF)
Handwashing	English (PDF)	Spanish (PDF)	Chinese (PDF)
Hot Holding	English (PDF)	Spanish (PDF)	Chinese (PDF)
Reheating	English (PDF)	Spanish (PDF)	Chinese (PDF)
Time As a Control	English (PDF)	Spanish (PDF)	Chinese (PDF)
General	English (PDF)	Spanish (PDF)	Chinese (PDF)

These fillable templates were developed to guide you in developing policies for your business.

Contact Us

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Phone: 602-506-6970

Hours

Monday - Friday
8 a.m. - 5 p.m.

Industry Contacts/Office Locations

Restaurant Ratings App

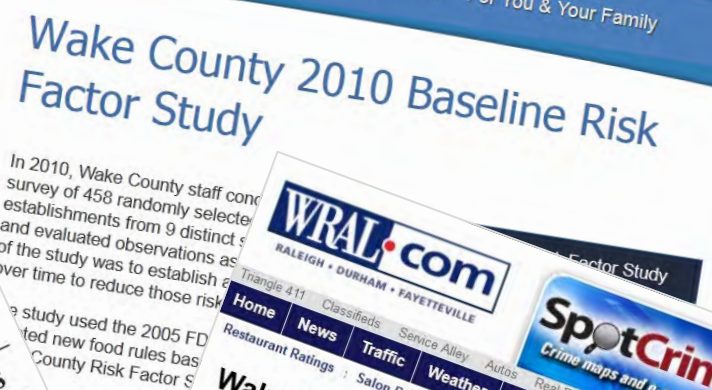


Assessing improvements or regression over time

Risk Factors IN compliance	AVERAGE	
	2010	2015
Food Source	95%	96%
Inadequate Cooking	91%	94%
Improper Holding	57%	66%
Contamination	87%	88%
Personal Hygiene	82%	90%
Other items of interest		
Certified Food Protection Manager Present	42%	72%
Employee Health Policy	10%	66%
Cold Holding	48%	56%



Risk Factor Study (2010)



HIGH JINKS, NOT HIGH TECH, WITH POODLES



Teen takes deal in phony bomb threats

At 16, Oxford lad made threats as online pranks



Wake inspectors look for food-borne illness risk factors

Wake County inspectors examined 458 randomly selected facilities, including restaurants, school and hospital cafeterias, nursing homes and delis.