March 2020

The Samuel J. Crumbine Consumer Protection Award

for Excellence in Food Protection at the Local Level

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SNHD
Southern Nevada Health District

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Cover photographs taken by EH staff members: Jacob Billings, EHS II; Miki Sakamura-Low, EHS II; Aminta Martinez-Hermosilla, EHS II; Christian DeHaan, EHS II, and Tory Rich, EHS II.

EXECUTIVE SUMMARY

Clark County is the 14th-largest county in the nation geographically and is home to the metropolitan cities of Las Vegas, North Las Vegas, and Henderson; the small cities of Boulder City, Laughlin, and Mesquite; and the rural communities of Sandy Valley, Indian Springs, Searchlight, Mount Charleston, and Moapa Valley. Clark County has 2.2 million residents (76% of Nevada's population) and welcomes over 42 million visitors annually. The Southern Nevada Health District (SNHD) was originally created by statutory authorization in 1962 and was formerly named the Clark County Health District (CCHD). At the time, there were 30 staff in the entire CCHD and 800 food establishments. The CCHD was honored to receive the Crumbine Award in 1998. In 2006, the organization's name changed to the SNHD and has continued growing to become one of the largest, most innovative health departments in the United States.

The Environmental Health Division (EHD) of the SNHD includes the Food Operations Program, which is the regulatory inspection program for all food establishments in Clark County. The Food Operations Program uses risk-based inspections to regulate 21,500 permits and more than 4,900 temporary food establishments (TFEs) annually. The SNHD regulates all food facilities including packaged food stores, drinking establishments, processing facilities, warehouses, mobile vending, TFEs, and restaurants. According to the National Restaurant Association, restaurant sales in Nevada exceeded $9.9 billion in 2018 and the food service industry provided 219,200 jobs in 2019—approximately 15% of the state's employment!

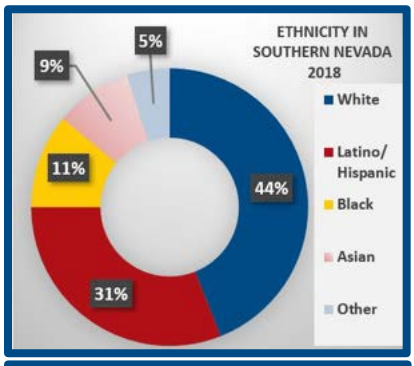
To keep up with the culinary artistry of Southern Nevada's food service industry, the SNHD must be innovative as well. At every opportunity, the Food Operations Program has become more resourceful and imaginative in how to reach food establishment operators with the most up-to-date science and technological advancements in food preparation and service. The level of industry support and training the SNHD provides is recognized at community, state, and national levels. The SNHD transparently shares resources with all those who wish to improve their food safety programs.

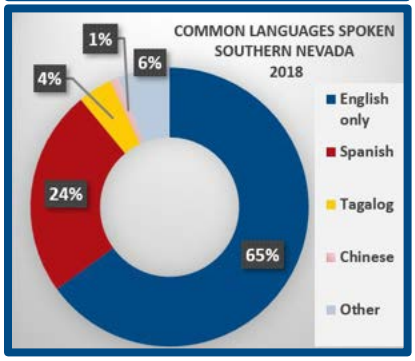
The SNHD works with other jurisdictions through participation in national projects and programs, such as the Conference for Food Protection (CFP), the National Association of County and City Health Officials (NACCHO) mentorship program, and the National Environmental Health Association (NEHA) workgroups. SNHD staff are frequent presenters at conferences, including partnering with the Nevada Environmental Health Association (NvEHA) and the Nevada Food Safety Task Force (NFSTF), sharing ideas with their peers, as well as taking advantage of interactions with stakeholders at all levels to improve their programs and services. The SNHD continues to move toward conformance with the Food and Drug Association (FDA) Retail Program Standards and embracing quality assurance ideas and practices as part of EHD's operational culture. The SNHD is voluntarily working toward accreditation by the Public Health Accreditation Board (PHAB), embracing the process with agency-wide quality improvement efforts. The site visit took place in January 2019. Action plan documents will be submitted September 2020 and a PHAB decision should be available by March 2021.

Using all available resources, including funding from many FDA sponsored Retail Program Standards Grants, the following resources have been produced: handwashing intervention strategy educational materials, allergen awareness strategy educational materials, Environmental Health Expo booths about food safety, Food Safety Video Series on YouTube, a Special Processes training course open to industry and regulatory stakeholders, processes for electronic submission of HACCP plans and waivers, improvements to the Food Establishment Resource Library (FERL), Food Safety Assessment Meeting (FSAM) preparation videos, and a conference on understanding and preventing outbreaks of foodborne illness (FBI). This list is not all inclusive but gives an overview of the types of creative thinking the SNHD encourages in their staff to solve problems and build relationships with industry stakeholders and regulatory peers in Southern Nevada and beyond.

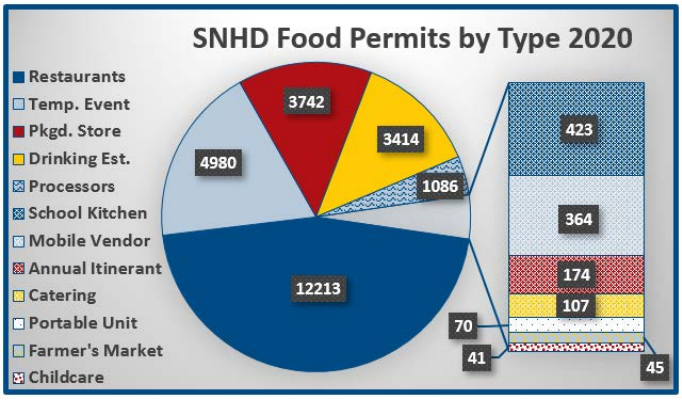
The SNHD is the Public Health Authority for Clark County, which includes the metropolitan cities of Las Vegas, North Las Vegas, and Henderson; the small cities of Boulder City, Laughlin, and Mesquite; and the rural communities of Sandy Valley, Indian Springs, Searchlight, Mount Charleston, and Moapa Valley. This application covers programs and improvements reflecting a six-year time period from March 2014 to February 2020.

Clark County is the 14th-largest county in the nation covering approximately 8,000 of Nevada's 109,781 square miles. Accounting for nearly three-quarters of the state's population, the county houses 2.2 million residents. Clark County is markedly diverse; non-Hispanic white individuals comprise less than half of the county's population at 44%, compared to 61.5% nationally. Hispanic and Asian residents comprise larger shares of the population than in Nevada overall or the United States. As a result, a higher percentage of Clark County residents speak languages other than English at home. The Clark County School District reports its students speak 92 languages representing 132 countries. Clark County has a lower percentage of population with college or advanced degrees at 31.1% compared to 39.2% nationally. The median household income is five percent lower than the national median. Clark County has a poverty rate of 14%, compared to 12.3% nationally. Clark County has a larger proportion of young to middle-age adults 25-49 years old. These demographics are considered in producing oral culture learner resources.

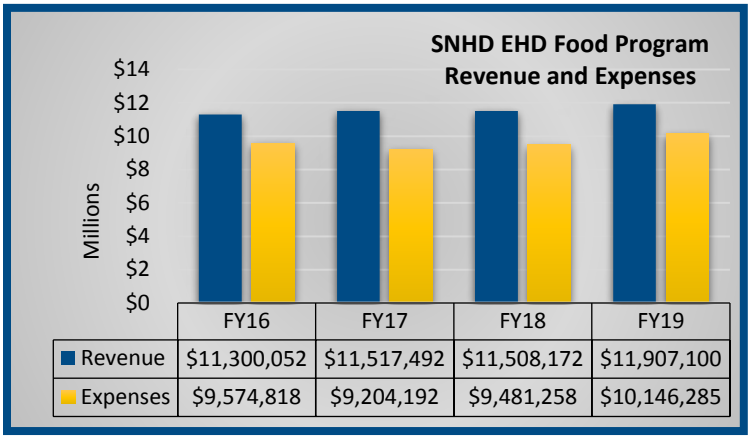




Southern Nevada receives over 42 million visitors annually, which is twenty times the number of residents. In recent years, professional sports came to prominence. By close of 2020, Las Vegas will be home to an NFL team (Raiders), an NHL team (Golden Knights), a WNBA team (Aces) and a USL team (Lights).This is in addition to the University of Nevada, Las Vegas (UNLV) NCAA Division I athletic teams, NASCAR, UFC, Boxing, AAA baseball, the NBA Summer League, Professional Bull Riders world finals, and National Finals Rodeo.



The SNHD EHD Food Operations Program is the first line of defense to ensure a healthy and safe environment for residents and visitors, regulating over 21,500 permits and more than 4,900 TFEs annually. The SNHD regulates all food facilities including packaged food stores, drinking establishments, processors, warehouses, mobile vending, TFEs, and restaurants. The culinary culture of Southern Nevada is unique. It includes resort properties with complex, large-scale food operations, such as mega-buffets serving thousands of meals daily. These kitchens routinely incorporate special processes such as cook-chill and sous vide. There are also celebrity-chef restaurants, five-story nightclubs, and a wide range of ethnic restaurants reflecting Southern Nevada's diverse population. In fact, in a single restaurant one might find interesting and unique foods such as Korean-Mexican fusion, sushi burritos, or even pizza served with crickets on top. Las Vegas has one of the nation's top-rated Chinatowns and is known as Hawaii's unofficial 9th island. These factors combine to make Southern Nevada a world-renowned foodie destination.



The SNHD EHD Food Operations Program is funded directly by fees for permits, plan review activities, and other required service fees.

The year-over-year increase in revenue reflects the growth in the number of permitted activities. Expense growth shows the resource cost necessary to conduct inspections and related activities.

FY19 Food Fee Revenue	
Annual Fees	$9,695,680
FDAP	$1,525,961
Inspection Fees	$671,109
Seasonal	$14,350
TOTAL	$11,907,100

Revenue is commonly categorized by the type of service or activity. Permit fees cover the cost of providing annual inspections and are based on several factors including type and size of facility and number of seats. Restaurant annual permit fees range from $211 for a small main kitchen or fast food restaurant to $1,308 for a large banquet kitchen. Food processors pay annual permit fees in the range of $417 for a small food processor to $1,871 for a very large food processing operation. Some types of permits pay an additional charge for the number of customer seats in their facility at $2.71/seat; the assumption is the more seats, the more consumer activity (See **Appendix A** for the current EHD fee schedule).

Fees for plan review activities are also based on cost recovery for the resources consumed by SNHD staff to ensure compliance with the *Regulations Governing the Sanitation of Food Establishments* upon the opening of new or remodeled facilities. Fees are paid at the time of service for Facility Design Assessment and Permitting (FDAP), which conducts the review of building and operational plans related to applications for new, remodel, or facility changes of ownership (of existing permitted establishments). FDAP fees vary based on size and complexity of the facility and fall within a general range of $398 to $2,029 for most brick-and-mortar establishments. At this time, not all services provided to SNHD permit holders are directly cost recoverable; however, the SNHD feels, intrinsically, that providing services like outreach and some on-site training reduces the need for more in-depth compliance monitoring in the future.

Staffing to regulate food establishments includes: 1 Director of Environmental Health, 2 EH Managers, 8 EH Supervisors, 9 Senior EH Specialists, 3 Training Officers, 1 Analyst, 67 EH Specialists I & II, and 9 Administrative Assistants, for a total staff of 100.

Grant Funding 2015-2020		
Grant Name	#	Amount
CDC EH-Net Cooperative Agreement (5-year)	1	$962,500
FDA VNRFRPS Cooperative Agreement (5 year)	1	$350,000
AFDO Retail Program Standards	20	$88,020
NACCHO Mentorship Program	6	$64,400
TOTAL		$1,464,920

The Food Operations Program also receives grant funds from the FDA, the Association of Food and Drug Officials (AFDO), NACCHO, and the CDC. Grant funding is accounted for in a project/program-specific manner and is not considered part of the food operations operating budget. **Appendix B** provides a detailed explanation of grant funding received and how those funds were utilized to advance food safety programs and conformance with the standards. Over the course of the six-year application period, approximately $1,464,420 has been granted and utilized by the Food Operations Program for significant improvements to food protection activities and FBI response.

The Southern Nevada Health District's mission is "To assess, protect, and promote the health, the environment, and the well-being of Southern Nevada communities, residents, and visitors."

The organization's overall vision is "Healthy People in a Healthy Southern Nevada."

The Food Operations Program provides inspections of all food establishments throughout Clark County, which include traditional restaurants, temporary events, farmer's markets, mobile food establishments, and seasonal permits (See **Appendix C** for examples of large Special Events). The inspection process is based upon mitigation of the FBI risk factors identified by the CDC and FDA. In addition to state-mandated annual evaluation, EH staff provides an increased inspection frequency for noncompliant facilities to ensure behavioral change and long-term food safety practice. Through responsible partnering, mentoring and risk-based inspection practices, EH staff promotes active managerial control to reduce the occurrence of FBI. These practices result in safer food being provided to the residents and visitors of Clark County.

The Food Operations Program uses the following goals to focus EH staff, making the SNHD's mission and vision a reality:

- Reduce FBI risk factors in regulated food establishments.
- Enhance food handler knowledge of food safety.
- Improve food handler food preparation practices.
- Engage with community partners and major stakeholders for food safety partnerships.
- Increase inspection frequency and Environmental Health presence in the community.

The SNHD Food Operations Program has been actively participating in meeting the Voluntary National Retail Food Regulatory Program Standards (VNRFRPS or Standards) since 2012 and completed a baseline self-assessment for all nine standards in 2015. Each year, through effective use of cooperative agreements and grants, several programs and projects have been implemented that have advanced conformance to the Standards. Specific projects such as the Handwashing Intervention Strategy in 2017 and the Allergen Intervention Strategy in 2019 have been used to improve outcomes in food safety (see **Page 13-Challenge 1** and **Appendix D**). These projects were specifically chosen to support the findings of the Risk Factor Studies completed as part of the progress toward meeting the Standards. The Food Operations Program will continue to seek all opportunities for funding that will benefit the food safety outcomes in Southern Nevada's communities.

In addition, the Food Operations Program has become a mentor to several cohorts under the NACCHO Mentorship Program. After first being a mentee in the program during Cohort IV, the SNHD went on to successfully mentor 11 mentees during Cohorts V through IX (current mentorship cohort). Mentees have made significant progress toward meeting the Standards in their own right. The SNHD strives to share knowledge and provide support to peers for the improvement in food safety programs throughout the nation.

Food Operations staff participate at multiple levels of local, state, and federal programs such as the CFP to improve not only SNHD's own processes but to share successes and ideas with others. Food Operations staff routinely present the most current information available to peers at local, state, and national conferences (See **Appendix E**). Abstracts are frequently accepted, and staff are often solicited directly for speaking engagements. The SNHD participates in NEHA workgroups, contributes to the FoodSHIELD database, and actively enters data into the National Environmental Assessment Reporting System (NEARS).

As the Public Health Authority in Clark County, Nevada, the SNHD has jurisdiction over all public health matters pursuant to Nevada Revised Statutes (NRS) Chapter 439, *Administration of Public Health*, which gives the SNHD the authority to adopt regulations. NRS 446.940, *Enforcement*, requires that regulations be as strict or more stringent than NRS Chapter 446, *Food Establishments*. As such, the SNHD adopted the *SNHD Regulations Governing the Sanitation of Food Establishments* on January 28, 2010. This regulatory foundation is based on the 2005 FDA Food Code. With updated regulations, a new inspection form documenting the compliance status of each risk factor and intervention by indicating IN, OUT, NO, or NA for critical and major violations was also implemented in 2010 (see **Appendix F**). Inspections are risk based and inspection scores and grading methods are reflective of this.

After adoption of these regulations, the Food Operations Program progressed to gain better compliance through education, intervention, outreach, and regulatory enforcement, as necessary. Illustrations of key regulatory foundation components and accomplishments include:

- A "Think Risk" initiative was launched in 2014 to shift the operator's focus to CDC's five FBI risk factors.
- An FSAM program was implemented in FDAP. The FSAM's purpose is to assess a permit applicant's food safety knowledge during the plan review process to ensure they can safely operate a food facility prior to permit approval.
- Food Safety Partnership meetings conducted by Food Operations leadership were implemented in 2016. These quarterly industry outreach meetings are comprised of training on current food safety topics and regulatory guidance followed by a question and answer period for attendees.
- An inspection scoring system using letter grades (A, B, or C) was updated in 2014 by removing demerits associated with good retail practices to reinforce the focus on FBI risk factors and interventions (see **Appendix G** for grade cards). Grade cards must be posted in clear view of the general public. The regulations establish timeframes, which require prompt corrective action on violations associated with FBI risk factors. An Administrative Process Policy has been enacted with progressive and prescriptive measures for non-compliant operators (see **Appendix H** for policy). The process begins with a Training Intervention conducted by a Training Officer. If the operator advances in the Administrative Process through inspection non-compliance, further conditions are placed on the permit holder to achieve success and gain active managerial control. These conditions include requiring additional Certified Food Protection Managers (CFPMs) and hiring a food safety consultant. A permit holder's health permit can ultimately be revoked through an impartial administrative hearing if compliance is not achieved throughout the Administrative Process.
- Development and issuance of a PASS result card for annual itinerant food vendors was implemented to easily inform the community of the vendor's food safety/permit status.
- A strong digital and social media footprint has been developed, providing food safety resources, which include: a phone app, *Restaurant Grades Southern Nevada*, providing food inspection grades and findings; creation of a *Foodhandler Safety Training Card Study Guide* (available in 29 languages) and video series addressing various food handling practices associated with FBI risk factors; a robust website resource library (www.snhd.info/ferl); and Facebook, Twitter and Instagram representation (See **Appendix I** for English *Study Guide*).

Moving forward, as the SNHD strives for excellence, accreditation, and compliance with FDA's VNRFRPS, SNHD is currently in the process of updating the regulations to promulgate the 2017 FDA Food Code.

Prior to the implementation of the standardization process during the six-year application timeframe, the SNHD had its own organized training program for inspection staff based on FDA guidance and best training practices. All SNHD EHSs must be Registered Environmental Health Specialists (REHSs) or be registered as REHS Trainees within the State of Nevada according to the requirements of NRS 625A, *Environmental Health Specialists*. The REHS credential requires educational criteria of a baccalaureate or higher degree with certified transcripts for at least 30 semester hours or 45 quarter hours in core natural science credits and experience of at least 2 years of practice of EH. The Nevada Board of REHS contracts with NEHA for the REHS exam.

Food Operations Program inspection staff undergo a regimented training program for four to six months. To improve upon existing programs, in 2015, the SNHD implemented the formal model for standardization of retail food inspections. The program design came from the CFP Field Training Manual with the following core focus areas: Pre-inspection, Inspection Observations and Performance, Oral Communication, Written Communication, and Professionalism. Staff first observe designated core trainers (**pictured on right**) conduct at least 25 inspections of establishments within a variety of food risk categories, followed by a minimum of 25 inspections conducted by the trainee while under the direct oversight and input by core training staff, and concluding with a final sign-off inspection evaluated by senior training staff to determine if the inspector can effectively perform a risk-based inspection, while demonstrating effective communication skills. Staff must then complete a minimum of 25 independent Category 3 or Category 4 inspections prior to entering the standardization process.

Core Trainers: (front left to right) Tara Edwards, Korie Northam, Alexis Barajas, Jacque Raiche-Curl, Jodi Brounstein, Debbie Clark, Mikki Knowles and (back left to right) Kendra Lett, Ray Campa, Larry Navarrete, Kevin Pontius, Summer Holloway. (Not pictured) Anthony Santiago, Tom Sheffer, and Christine Sylvis

In addition to the field component of training, all new food inspection staff must pass the Serv-Safe® CFPM exam and complete all recommended FDA Office of Regulatory Affairs (ORA) U courses outlined in Standard 2 of the VNRFRPS.

To standardize food inspection staff in accordance with the FDA model, the SNHD has two training staff who are FDA Standards responsible for standardizing the Food Operations Program EH Supervisors and Senior EHSs, designated as SNHD Standards. The SNHD Standards are responsible for standardizing the remainder of the food inspection staff. To date, 17 SNHD Standards and 68 inspection staff have successfully completed the standardization process. New staff are standardized within approximately 18 months of assignment to the Food Operations Program. All staff are re-standardized every three years.

Food inspection staff are responsible for completing a minimum of 20 contact hours of continuing food safety education every 36 months (as well as 24 contact hours of EH continuing education every two years required by REHS credential). The SNHD offers a variety of opportunities for staff to achieve these contact hours through attendance at both national and local conferences, online trainings, and webinars. In addition, the EH Division's Regulatory Support Office facilitates training opportunities such as communication skills training, Hazardous Waste Operations and Emergency Response (HAZWOPER), NSF HACCP Manager Course (completed by 69 staff), and FDA courses such as FD218, Risk Based Inspections Course (completed by 77 staff). After a need for special processes training was identified, the Regulatory Support Office created training in 2019. All staff are scheduled to attend, and an offer was extended to industry to attend as well.

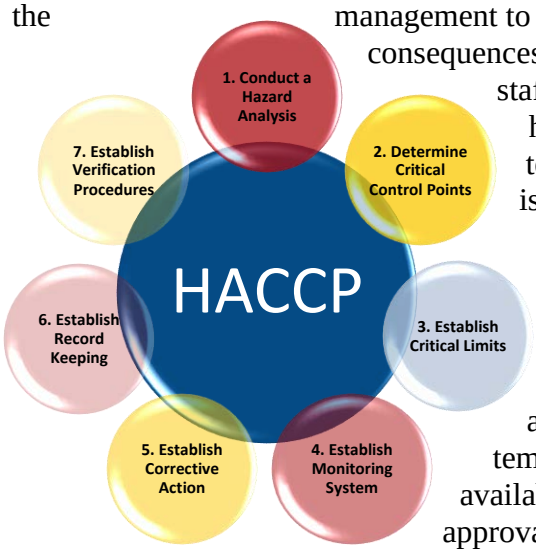
The SNHD has used HACCP principles to conduct risk-based inspections with emphasis on the five FBI risk factors for many years, including years prior to the six-year application timeframe. However, significant improvements to the HACCP program have been instituted in the ensuing years.

Inspectors attend FDA Risk Based Inspection Methods (FD218) and HACCP manager trainings. To focus on risk factors, the inspection form was updated in 2010 in conformance with the CFP training manual regarding risk-based inspections. The form includes designations for In Compliance (In), Out of Compliance (Out), Not Observed (NO), and Not Applicable (NA), Corrected on Site (COS), and Repeat Violations (R). The form is divided into critical violations, major violations, and good retail practices and includes areas for violations, inspector observations, and corrective actions with regulation references (**Appendix F**). Electronic food inspection software, Envision Connect, has been used since 2010, which helps ensure violations and corrective actions are documented consistently by incorporating predetermined comments. For additional consistency, marking instructions are utilized by staff.

Inspection frequency is determined by risk category and compliance history. The SNHD categorizes its regulated facilities into four risk categories with increased inspection frequency for facilities conducting complex processes. In addition, facilities receiving a downgrade during the routine inspection are inspected at an increased frequency (See **Appendix J**). Facilities with a history of non-compliance are addressed through the Administrative Process (Details discussed on **Page 9**).

Risk Category	Description	Inspection Frequency (A grades)
1	Pre-packaged Food & Minimal Food Operations	Annually
2	Limited Food Operations	Annually
3	Complex Food Operations	Twice annually
4	Special Processes, Processing & Highly Susceptible Populations	Twice annually

The inspection process is focused on enforcement and education. Prior to the inspection, a file review is conducted to gain knowledge regarding layout and flow of food, compliance history, administrative process status, interventions, and approved special processes and waivers ("waiver" has the same definition as Food Code "variance"). During inspections, immediate corrective action must be taken for critical and major violations (risk factors and interventions). Repeat critical or major violations on subsequent inspection may result in a downgrade to the next lower grade. To achieve long term compliance, inspectors collaborate with the facility and create Risk Control Plans and Compliance Schedules. At the end of inspections, staff debrief with the management to ensure they understand the violations, corrective actions, and consequences if risk factors are not brought into compliance. As part of the debrief, staff utilizes the newly updated SNHD website to provide facilities with handouts, guidance documents, logs, etc. for risk factors that are found to be out of compliance. The combination of enforcement and education is vital to obtaining Active Managerial Control at the regulated facilities.



The SNHD regulations require approval of HACCP plans and waiver submissions for certain special processes. The SNHD EH Regulatory Support Special Processes team reviews and approves applications and have developed HACCP validation and waiver policies in alignment with the VNRFRPS, Standard 3. Guidance documents, templates, and samples of the most common types of plans/waivers are available on the SNHD website and provided to aid operators. Validation and approval of HACCP plans and waivers begins with a preliminary meeting, continues through review and requests for corrections to the plan, and concludes with a field evaluation at the facility. Verification is conducted during routine inspections.

Prior to the Quality Assurance (QA) policy implementation in July 2017, integral cumulative steps occurred leading to a QA program. The Violation Standards Document (VSD) created by the Regulatory Support Office provided marking instructions for documentation of violations. Adoption of new food establishment regulations in 2010 (based on the 2005 Food Code) increased regulatory oversight to an innovative food market. Emphasis on risk-based inspections taught staff and industry to assess FBI risk factors. In 2014, quarterly staff meetings were scheduled with EH staff, which ensured dissemination of information related to policy changes and regulation interpretations. Despite these efforts, a need for consistency among inspectors was identified.

In 2015, the first round of standardization of food inspection staff solidified consistency with risk-based inspections. In 2016, conversion to Envision Connect electronic inspection reports with searchable, uniform comments created conformity in wording and citing regulatory references. The goal of ensuring standardized, high quality inspections conducted in a professional manner, at a frequency based on risk assessment and compliance status, with an efficient use of time and program resources is ongoing.

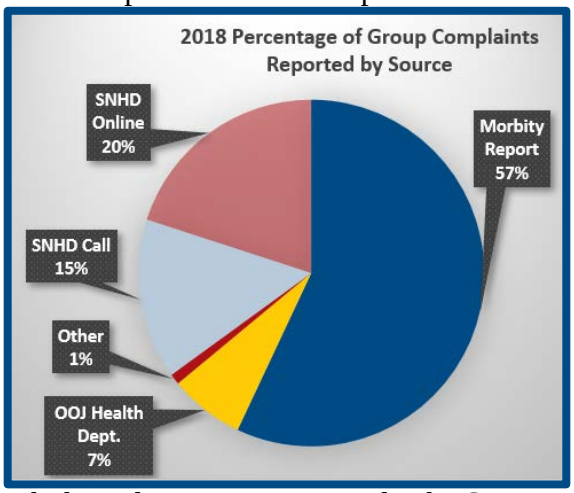
The QA Policy applies to all EHSs who have met the training requirements of Standard 2, including standardization, and who conduct inspections of food facilities. Within the respective working groups of Food Operations, FDAP, and Special Programs, EH Supervisors and Senior EHSs conduct a quarterly QA audit; reviewing a risk category 3 inspection report form and facility record for each EHS. The focus is on technical documentation and accuracy of electronic records. Staff qualify for an audit if they have conducted at least twelve unannounced inspections within the quarter. At minimum, one audit is done per calendar year. The audits are reviewed with staff for awareness of corrections needed to be in alignment with internal policies.

In addition, a QA field evaluation is conducted annually. The field evaluation form addresses the 20 Program Elements of Standard 4. The EH Supervisor/Senior EHS selects a risk category 3 facility and conducts a thorough file review consisting of the previous two routine unannounced inspections, any activities between inspections, and overall record details. The EH Supervisor/Senior EHS observes staff members while they conduct an inspection; evaluating the assessment of risk factors, customer service/interpersonal interactions, conveyance of critical information, and use of education practices versus enforcement actions, to include discussion of strategies for long-term compliance. After the field evaluation, another file review ensures that proper inspection documentation, record maintenance, and necessary follow-up were completed.

EH Supervisors and Senior EHSs conduct annual peer reviews for the QA audits and field evaluations, as assigned by a randomizer. Currently, marking instructions are being developed for use with the specific QA audit and field evaluation forms.

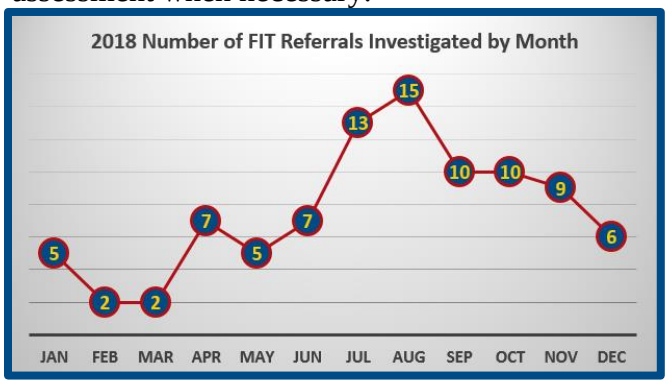
In 2018, the first full year the QA policy was in force, for QA audits and field evaluations completed, data show a greater than 75% passing rate of all 20 program elements. Compilation of 2019 data is ongoing; however, results like 2018 are expected. This data trend shows the SNHD is conducting uniform inspections with a focus on the long-term control of FBI risk factors. The QA program's success is credited to engagement from all levels of staff. The SNHD looks forward to meeting Standard 4 once three field evaluations have been conducted for all eligible inspectors.

Prior to the six-year application period, the SNHD has maintained an FBI investigation program that has made continuous improvements over two decades, leading to the outstanding program currently in place. The SNHD was very proud to meet Standard 5, Foodborne Illness and Food Defense Preparedness and Response with a verification audit in 2019.



The SNHD has a Foodborne Illness Taskforce (FIT) comprised of EH, epidemiology, and laboratory members. The FIT meets quarterly to refine protocols, problem solve between outbreaks, and establish relationships. In the event of an outbreak, this team, along with the public information officer and a public health preparedness representative, can convene quickly for daily briefings to share updates from each group and plan next steps.

The SNHD obtains FBI and injury complaints through various methods as prescribed by the *SNHD Foodborne Illness Outbreak Response Guide* (See **Appendix K**). Sick community members can report their illness directly to the SNHD over the phone or through the online reporting portal. The SNHD also checks on *IWasPoisoned.com*, which is a consumer self-reporting online platform, and follows up with complaints that have provided contact information. Finally, the SNHD works with the medical community and investigates lab-confirmed diagnoses of reportable enteric illnesses. All complaints of FBI and injury, including intentional and unintentional food contamination, are collected in the FBI database. This database is routinely reviewed to identify outbreaks specific to one restaurant, one restaurant chain, one geographical area, one pathogen, or one food type, and that information is shared with the EH team to conduct an environmental assessment when necessary.



The SNHD has thirteen staff available to respond to any potential outbreak in accordance with the *SNHD Foodborne Illness Outbreak Response Guide*. These EH investigators have completed the CDC's online Environmental Assessment Training Series (EATS) 101 and 102, which covers conducting environmental assessments; two classroom trainings; and field observations before being released to conduct environmental assessments.

During a potential outbreak, the EH investigator will respond with the food inspector who is assigned to that restaurant. The EH investigator has the expertise on investigating outbreaks and the pathogen, while the food inspector has experience with the facility and the relationship with the management. Together, they work with the food facility's staff to identify and correct contributing factors to FBI and environmental antecedents. At the conclusion of the outbreak investigation, EH investigators upload the outbreak data into the National Environmental Assessment Reporting System (NEARS). The SNHD is also part of the NEARS Users Group and has been involved in the team effort to update the instrument and guidance document to improve NEARS data collection. The epidemiology team report their outbreak data to the National Outbreak Reporting System.

In addition, staff have co-authored published studies in coordination with professors at UNLV on machine-learned real-time detection of FBI and data mining social media for occurrences of FBI (See **Appendices L and M**). The SNHD is currently developing a public information campaign to encourage the public to report symptoms of FBI directly to the SNHD. This campaign is planned for implementation throughout 2020. A memorable slogan and visual icon will be advertised on social media platforms and at public community events.

The SNHD Food Operations Program has implemented a uniform enforcement procedure to control risk factors and increase compliance among chronically noncompliant food establishments. Education, consultation, and enforcement are embedded into the various enforcement procedures. Similar policies existed prior to the current six-year application period; however, in the ensuing time period, the Food Operations Program has significantly improved the conformity to the Retail Program Standards and efficacy of the enforcement and compliance aspects of the food inspection program. The intent is to gain compliance in the least punitive manner possible and to build professional relationships while decreasing the occurrence of FBI in the community.

When a facility is downgraded due to noncompliance with the regulations, they are given fifteen business days to schedule a reinspection. During the reinspection, facilities must pass with less than 10 demerits and have no repeat critical or major violations. Failure to pass reinspection results in a further downgrade or closure of the facility. Additionally, there are imminent health hazards that result in closure of the facility if they cannot be controlled immediately.

Facilities that consistently fail inspections or have repeated violations of risk factors, are put into the Administrative Process. The 12-18-month Administrative Process requires facilities to be on an increased inspection frequency in which they receive an unannounced inspection every 3-4 months. The Administrative Process includes the following steps:

The first step, Intervention Training, focuses primarily on education including a four-hour in-depth training with all Persons in Charge of the establishment and all facility staff who wish to participate. The intervention provides comprehensive food safety training with a focus on out-of-control risk factors, root cause analysis, and corrective actions. Additional stipulations may require facilities to maintain and submit logs. The process also requires a CFPM to be on-site during all hours of operation.

Failure to demonstrate improvement following the Intervention Training will lead to a Supervisory Conference in which the operator meets with the food inspector and their supervisor. The Supervisory Conference provides an in-depth violation history to the operator, the opportunity to work through an improvement plan that sets concrete goals in order to increase food safety, and the opportunity to ask upper management for information and additional support. The facility is also required to hire a food safety consultant to assist with training and conduct routine food safety checks at the establishment. Failure to comply following the Supervisory Conference will lead to a Managerial Conference in which the operator meets with the food inspector, supervisor, and the Food Operations manager. At this point, the facility must pass inspections with an A grade for the next 18 months, maintain all required logs, and have a CFPM on site during all operational hours. Failure to do so leads to suspension of the health permit (closure of the facility), pending revocation. The Revocation Process may include a last chance agreement or legal administrative hearing to revoke the facility's permit holder to operate a food establishment permanently.

The process outlined above is designed to bring facilities into compliance by providing the necessary education, consultation, and tools that they need to safely operate a food establishment and protect the public from FBI. Since the Administrative Process began in 2017, 164 Intervention Trainings have been conducted, with the majority of facilities coming into compliance and successfully exiting the process.

Prior to the six-year application period, the SNHD was already deeply committed to developing food safety educational information and communicating it to industry and the public in creative ways. Within the application period, the SNHD has expanded its communication efforts significantly, including using technology such as YouTube and other social media platforms. Specific ways the SNHD has focused on communication and engagement include resources and handouts, information exchange, and collaboration described below. The SNHD will continue expanding these resources and innovations as future means are developed.

The most expansive resource the SNHD provides for information on food safety is the FERL. The FERL contains free, downloadable documents. Handouts and resources include:

- **Logs:** cooling, cooking, holding temperatures, employee absence, sanitation, etc.
- **Templates and Checklists:** time as a public health control template, daily food safety checklist
- **Handouts:** allergen awareness, hand washing, calibration procedure, cooling procedure, sanitizer preparation and use, ware washing procedure
- **Videos:** Eight, 2 to 3-minute videos, developed in-house, demonstrating food safety practices in realistic scenarios (See **Appendix N** for description of the SNHD Video project)
- **Miscellaneous promotional items:** stickers, highlighters, magnets, and pens, *Food Safety at a Glance* Cards (See **Appendix O**)

The SNHD is committed to ensuring that information is shared on a variety of platforms and that it may be accessed and consumed in various ways. Some examples include:

- The last page of the inspection report, which is dedicated to a topic of interest and updated quarterly. Past "last pages" include: "How to Spot a Fake Health Inspector," "What is West Nile Virus?", and announcements for meetings and trainings (See **Appendix P** for examples).
- An extensive email listing of people that receive monthly updates from the Regulatory Support Office.
- A presence on Facebook, Twitter, and Instagram, which is regularly updated.
- Staff who are multilingual in large variety of languages, including, but not limited to, Spanish, Chinese, Hindi, Vietnamese, Tagalog, Amharic, French, Swahili, and Korean. Third-party translation services are also used for any languages not spoken by staff and handouts and resources are available in other languages.
- A Smartphone application that allows the public to look up inspection grades at any of the SNHD's permitted facilities: *Restaurant Grades Southern Nevada*.
- An internal newsletter and monthly staff meetings to receive relevant updates to share with facilities.
- A customer satisfaction survey completed as part of continuous quality improvement and progress toward PHAB accreditation. The results can be found in **Appendix Q**.
- See **Appendix R** for Standard 7 Industry and Community Interactions and Educational Outreach events.

The SNHD participates in several collaboration efforts annually, including:

- Nevada Restaurant Association, the Latin and Asian Chambers of Commerce, and major resort properties.
- Frequent meetings with corporate chefs, stewards, food and beverage directors, managers, and in-house food safety professionals conducted to discuss inspections and food safety issues and foster teamwork,
- Food Safety Partnership meetings for industry and the public, which are scheduled per quarter at the main SNHD campus, and at offices in Laughlin and Mesquite.
- Continuous presence at local and national conferences such as NEHA, NVEHA, NACCHO, FDA Pacific Region Conference, and CFP. (See **Appendix E** for a list of presentations given)
- Providing a Special Processes course in cooperation with the University of Nevada Cooperative Extension.

The SNHD Food Operations Program is responsible for ensuring food safety in approximately 21,500 permitted food establishments. This is achieved with an operational budget of $10,100,000. This budget is dependent upon fees per permit and changes according to the number of permits regulated.

Director of EH, Chris Saxton, speaks to the BOH—Re: Fees

Currently, permit fees are based upon the fee structure set by the SNHD Board of Health (BOH). The last adjustment to the fee structure was approved in 2010. Without adjustment to account for inflation, the SNHD Food Operations Program has struggled to match staffing size with the natural increase in permitted establishments over the last decade. The Food Operations Program is currently engaged with the BOH to evaluate the fee structure including conducting a time study analysis. The BOH recently approved an increase in fees associated with failed field inspections effective February 2020, which is projected to generate an additional $300,000 in revenue. The SNHD also actively seeks grant funding at every opportunity and has achieved many of its novel and outstanding programs, leading toward further compliance with the Standards and general improvement of food safety outcomes in the community (See **Appendix B** for a list of grants awarded).

The food program is supported by staffing shown in the table, "Current Staff--Title." The SNHD believes inspectors specialized per program is the best approach to adequately regulate the community. EHSs assigned to the Food Operations Program only inspect food establishments. FDAP provides plan review services for food establishments. Special Programs inspects food permits associated with schools and childcare.

Current Staff--Title	#
Director	1
EH Managers	2
EH Supervisors	8
Senior EH Specialists	9
Training Officers	3
Analyst	1
EH Specialists I & II (Food Operations 50) (FDAP 10) (Special Programs 6) (Regulatory Support 1)	67
Admin Assistants	9

The Food Operations Program has proposed adding the following staff after securing an increase in permit fees: One EH Manager, one EH Supervisor, one Senior EHS, twelve EHSs, and one Administrative Assistant. This increase will allow the program to be compartmentalized into the following components: FDAP, General Food Operations, and Regulatory Support, including Special Processes and Training.

The SNHD provides ongoing education to staff through many training opportunities. Staff can also select one EH-related training per year to attend during work time to fulfill continuing education requirements.

The SNHD provides staff with the necessary equipment to perform the functions of field inspections, including:

- Personal Protective Equipment, including slip-resistant shoes.
- A tablet-style computer with Envision Connect™ software.
- An iPhone with Wi-Fi hotspot, with the following Applications developed in-house by the SNHD's Information Technology Department:
  - A dedicated Photo App, with date and time stamp and GPS coordinates.
  - An App that allows inspectors to look up Food Handler Cards real-time in the field.
- Official photographic identification and metal badge.
- Thermocouples, minimum/maximum registering thermometers, flashlights, blacklights, light meters, sanitizer test strips, cameras, and other inspection equipment.
- In addition, equipment available for checkout by staff include pH meters, data loggers, projectors, portable screens, anemometers, glow germ products, large blacklights, and more.

In 2016, the SNHD conducted a restaurant Risk Factor Study (RFS) as required by Standard 9 of the FDA VNRFRPS (See **Appendix S**). A school and a grocery store RFS were conducted in 2017 and 2018, respectively. The studies closely mirrored FDA methodology, used FDA forms, and utilized the FDA FoodSHIELD database to examine baseline occurrences of FBI risk factors. As a result of the study, the SNHD determined the top five data items marked out of compliance are as noted in the following table:

Data Item IN Compliance	Fast Food / Full Service Combined % "IN"
03C. Food is protected from environmental contamination; actual contamination observed.	98.5
02. Food employees do not contact ready-to-eat foods with bare hands.	90.3
08B. Open commercial containers of prepared ready-to-eat TCS Food held for more than 24 hours are date marked as required.	85.8
03B. Different raw animal foods are separated from each other.	83.3
08C. Ready-to-eat, TCS Food prepared on-site and/or opened commercial container exceeding 7 days at 41°F is discarded.	81.3

With two of the five most common out-of-compliance risk factors related to improper hand washing, an intervention strategy was implemented during routine inspections in 2018 (see **Page 13-Challenge 1**). To evaluate the effectiveness of the intervention, the SNHD analyzed the percentage of routine unannounced inspections with hand washing violations between 2014-2019. The following was determined:

- There has been a general downward trend in handwashing violations every year since 2014.
- The average percentage decrease per year in inspections is 0.58 percent.
- The greatest percentage decrease in inspections was between 2018-2019, as expected. After the intervention, a 0.82 percent decrease was noticed.

A key difference in the data above and the RFS is that the RFS separates hand washing violations into hand washing when required, hand washing as required, and bare-hand contact whereas the inspection report has one overall hand hygiene violation encompassing all three issues. Moving forward, the SNHD seeks to analyze data from the RFS scheduled for 2021 to see if there has been a statistically significant difference in hand washing data items since 2016.

While Major Food Allergen awareness is not currently considered one of the five critical risk factors for FBI, it is an ever-growing area of public concern.

Combined					
Number of Information Statements	**IN**	**IN %**	**OUT**	**OUT %**	**TOTAL OBSERVATIONS (IN and OUT)**
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens.	39	29.1	95	70.9	**134**
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	86	64.2	48	35.8	**134**

In response to these results, the SNHD developed and implemented the Allergen Intervention Strategy in 2019 (See **Appendix D**). Qualitative/anecdotal feedback indicates that food establishment staff have improved awareness. Qualitative data for this intervention will be measured when the RFS is repeated in 2021.

During the SNHD's 2016 Risk Factor Study, personal hygiene was identified as the largest public health risk for food-based inspections. Both the first and fifth most frequent non-compliant issues dealt with hand washing. The data item with the most frequent non-compliance was "how to wash" hands as required at 76.9 percent OUT of compliance rate and next was "when to wash" at 41 percent OUT of compliance rate. Based on these data collected directly from the community, a handwashing intervention strategy was designed in 2017.

The intervention strategy included a hand washing discussion and demonstration during routine inspections and new permit approvals for 2018. Food Operations and FDAP inspectors were briefed at a staff meeting and were all provided a demonstration on how to communicate the information in the field. The inspectors were directed to start off the demonstration using the talking points as an introduction to *why* proper hand washing is so important (See **Appendix T** for posters).

Some important factors that were vital to the demonstration included having food handling staff present to observe and listen, using a thermometer to show what 100°F water feels like, discussing the importance of hand washing and personal hygiene, having the Person in Charge (PIC) be part of the demonstration, and letting the PIC know that the discussion was not part of the inspection or grade. The flyer and sticker were also given using the "Soapy" character and the "Get the Message!" theme.

Staff were asked to document that they performed the demonstration and provided the handout in the inspection report's general notes with the wording *"Provided 'Get the message…wash your hands' handouts and performed handwashing demonstration."*

The two posters were selected from several staff design submissions as part of an in-house competition to decide the handwashing intervention theme. The posters feature a "Soapy" character that discusses how and when to wash hands (English and Spanish) and a sticker depicting a conversation between Soapy and a chef about handwashing. The Soapy character has become well-known and children have reacted positively to it. (See photos of Soapy costume, designed in-house and sewn by EH staff).

***Soapy* defeats *poo* on Halloween**

Conversation Sticker

The success of the handwashing intervention strategy was discussed in **PART II, Page 12**, including charting of outcomes.

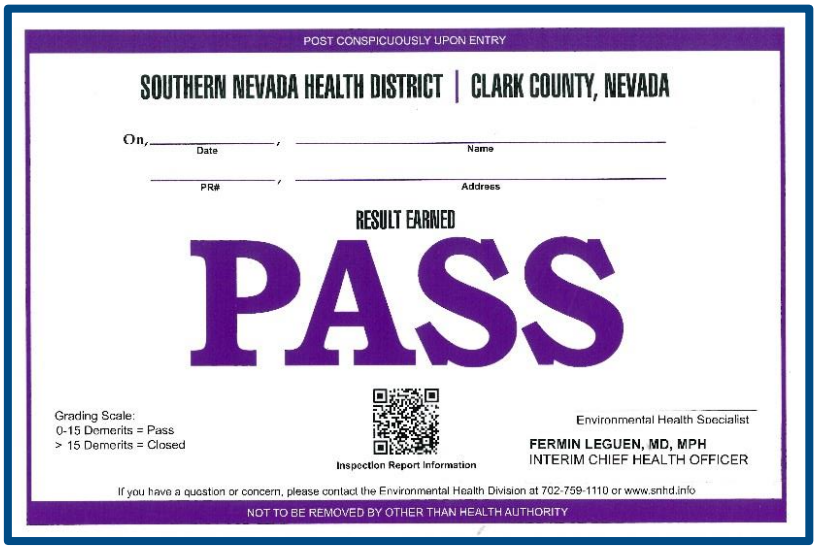
The SNHD plans to continue emphasizing handwashing as critical to reducing the risk factors of FBI and hopes to document ongoing statistical improvements to be measured in the 2021 restaurant RFS.

In May 2013, the Nevada Legislature passed, and the governor signed, the Cottage Food bill, Nevada Senate Bill 206 (SB206), allowing certain foods to be prepared and sold from a person's home and in certain other venues beginning July 1, 2013. There are strict rules for operating a cottage food operation, including restrictions on income, the type of foods that can be made and sold, and the venues in which these products can be sold. The SNHD was required by law to register these cottage food vendors and they became ubiquitous at craft fairs, farmers' markets, and other temporary events.

As the presence of cottage food vendors proliferated, the public reached out frequently to the SNHD through the complaint submission process to inquire whether vendors at venues such as farmers' markets and special events had health permits to operate and to determine if the SNHD inspected them. Consumers noticed that temporary food establishment booths did not have a grade card like those used in permanent food establishments. The public had come to expect seeing a grade card upon entering a facility and were wary when they did not see that visual confirmation of a passing inspection. In addition, permitted vendors were questioning why they did not have a grade card like restaurants indicating they passed their inspections. While they are required by the SNHD Food Regulations to post their health permits, they were not always obviously posted, nor did the public recognize that document visually in the same way they perceived the bolder looking grade cards. Another challenge was experienced when a large property held multiple Annual Itinerant permits but did not have those readily available for viewing. For instance, they were stored in a chef's office or other remote location.

The SNHD Food Operations Program needed a way to readily tell permitted vendors who received inspections and passed from other types of vendors such as cottage food operators or unpermitted individuals selling food. The idea for the PASS result card arose from this need.

In 2017, the PASS result card was developed. It was designed to resemble the other grade cards but was a different color scheme to differentiate it from the A, B, and C cards that were used in permanent food establishments. The color purple was chosen. The information on the result card mirrors other grade cards. Only a PASS result card was designed because if the facility received more than 15 demerits, they would not be allowed to operate negating the need for a FAIL card. Public Workshops were held in November 2017 to receive input from stakeholders and members of the public.


POST CONSPICUOUSLY UPON ENTRY

SOUTHERN NEVADA HEALTH DISTRICT | CLARK COUNTY, NEVADA

On, _____ Date, _____ Name

_____ PR#, _____ Address

RESULT EARNED

PASS

Grading Scale:
0-15 Demerits = Pass
> 15 Demerits = Closed

Inspection Report Information

Environmental Health Specialist

FERMIN LEGUEN, MD, MPH
INTERIM CHIEF HEALTH OFFICER

If you have a question or concern, please contact the Environmental Health Division at 702-759-1110 or www.snhd.info

NOT TO BE REMOVED BY OTHER THAN HEALTH AUTHORITY

The requirements of using the PASS card program were described to inspectors during a staff meeting. A period of public and vendor education ran from January 1, 2018 to December 31, 2018. During this period, vendors that held Farmers' Market, Annual Itinerant-High Risk, and Annual Itinerant-Low Risk permits were educated on what to expect when enforcement of using the PASS result cards was implemented January 1, 2019.

The PASS result card must be prominently displayed by all applicable permitted vendors providing the reassurances the public sought. Since the program was implemented, complaints regarding whether a food vendor at a special event was permitted and/or inspected has dwindled to virtually zero. The program met its goal of informing the public and providing vendors a tool to communicate with their customers.

During the six-year evaluation period, the Food Operations Program identified a challenge with training new inspectors. The training program was difficult to manage for several reasons. A trainee would enter the program led by a Training Officer in the Regulatory Support Office; however, the trainee would have joint field training with any EHS II in the Food Operations Program. At any given time in Food Operations, there was a large pool of trainers, between 25 and 35 EHS IIs. This led to difficulty scheduling regular meetings, inconsistency between trainers, lack of communication between trainers and the Training Officer, and inconsistencies in training methods and evaluation styles. Also, some EHS IIs had varying degrees of enthusiasm for training, making it difficult to obtain timely feedback when the trainers were less dedicated to the training program.

With the large food operations staff, hiring and training new inspectors remained a challenge, so a new concept was implemented. The trainees were to start directly assigned to one of the five Food Operations district offices, with Senior EHSs tasked to coordinate with the Training Officer. However, the Senior EHSs had too many competing priorities, could not allocate the appropriate amount of time to the trainees, and this concept reduced the number of trainers available to work with the trainee. The trainees were now limited in the type of inspections they would have available for joint field training, and the exposure to different methods of training and evaluation styles reduced from about 30 individual inspectors to about 5. The communication between trainers and the Training Officer had improved slightly, but inconsistency between trainers was about the same and did not show improvement.

Finally, the idea was proposed to designate two experienced EHS IIs to serve as ‘Core Trainers’ from each office for joint field training. Trainees would be assigned to the Regulatory Support office and receive training from the Regulatory Support office staff including the primary Training Officer, two additional Training Officers, a Senior EHS, an EHS II, and a Supervisor.

Objectives that were identified to resolve the challenge included selecting willing EHS IIs from each office to be part of the Core Trainer program. Further objectives included implementing the Core Trainer program in a manner that recognized the qualifications of the group, who would focus training on the program elements using the collective knowledge of experienced staff to develop inspection skill sets in the trainees. Regular meetings were scheduled with the Core Trainers and the Training Officer, as well as between the trainees and Training Officer to open lines of communication. Based on input, more concerted “train the trainer” efforts were developed and implemented.

Monthly meetings were held between the Core Trainers, Regulatory Support office staff, and EH Supervisors. These meetings identified progress of the trainees, any areas of inconsistency between trainers, and measured overall progress. Joint field training was scheduled with a balanced and enthusiastic pool of trainers and involving fewer people in the scheduling process with fewer conflicts. Better verbal and written feedback to the trainees and Training Officer, received in a timelier manner resulted.

Qualitative data indicate that Core Trainers and Training Officers are better able to discuss and resolve problems with trainees, resulting in fewer complaints of inconsistency. Dedicated trainers are more willing and able to give the appropriate amount of time and feedback to trainees. This resulted in a training program that is more of a cohesive team approach and provided opportunities for the professional growth of the Core Trainers. This system utilizing Core Trainers results in inspectors being trained faster and more efficiently. This gets more inspectors in the field, in facilities more frequently, and addressing the FBI Risk Factors in those facilities. The quantitative results regarding reduction or prevention of FBI risk factors will be more clearly understood following the 2021 RFS.

PART IV: PROGRAM LONGEVITY

As Southern Nevada continues to change, the SNHD will continue to keep pace with modern food trends by implementing program advancements. Some areas of success and continual improvement include:

- Increasing staffing by twelve EHSs, one senior EHS, and one supervisor. The SNHD will develop a specialized office within Food Operations that addresses specific needs of the community. This office will strategically inspect specialty facilities, such as:
  - Facilities with complex HACCP plans.
  - Manufacturing facilities that have additional regulatory requirements from federal agencies.
  - Mobile food vendors.
  - Farmer's Markets and other rural food venues.
  - Unpermitted Food vendor enforcement.
- Exceeding all internal and external mandates for food inspections in SNHD's jurisdiction.
- Strengthening and standardizing metrics utilized to evaluate EH staffing needed to perform quality food program regulatory oversight based on risk, as well as individual facility compliance measures.
- Continually refining internal training and professional growth opportunities.
- Further developing educational outreach to food industry partners and stakeholders.
- Continuing the marketing campaigns for the Food Operations Program that inform consumers, the regulated industry, and stakeholders on measures taken to ensure food safety in the community.
- Continually accessing and improving the Food Operations Program's communications and partnerships with the food industry, sister agencies, and the general public.
- Continued in-depth analysis of the SNHD EH fee schedule, proposing adjustments as needed, and presentation of these findings to SNHD's governing BOH. By being aware of the financial needs of the program and being able to communicate these needs to SNHD leadership, the Food Operations Program will ensure success in years to come.
- Participating in the PHAB accreditation process (See **Appendix U** for Accreditation Submission Newsletter).

Additional goals moving forward include:

- Integration of additional large venues, such as the upcoming Raiders' Allegiant Stadium and Resort World into the Food Operations Program. Large venues present challenges due to the work environment and require careful evaluation to ensure work is distributed equitably among staff.
- Assessment of data from QA activities to determine potential policy and procedural changes to the Food Operations Program.
- Analysis of food safety risks posed by modern trends in food, in coordination with SNHD's sister agencies, to resolve the regulatory challenges posed thereby.
- Completion of updates to *SNHD Regulations Governing the Sanitation of Food Establishments* based on the 2017 Model Food Code.
- Completion of the 2020 Retail Program Standards Self Assessment, subsequent to the 2015 Self Assessment.
- Completion of a restaurant risk factor study in 2021, following the 2016 completed risk factor study.
- Remaining active in the Retail Program Standards, including the NACCHO Mentorship Program.
- Applying for all available grant funding that furthers the Food Operations Program.
- Creating HACCP templates for common special processes to assist the regulated community in attaining compliance and preparing safe food.

The key to future sustainability is recognizing upcoming challenges early and taking action to address them, integrating solutions into the Food Operations Program using best practices and guidance from the FDA, USDA, CFP, NACCHO, and NEHA, as well as other regulatory and professional organizations.

Chris Saxton, MPH-EH, REHS
Director of Environmental Health
Southern Nevada Health District

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The Southern Nevada Health District, Environmental Health Division, Food Operations Program grants permission to the Foodservice Packaging Institute to place this Crumbine Award application on www.crumbineaward.com.

Respectfully submitted,

Chris Saxton
Director of Environmental Health
Southern Nevada Health District

UNLV | SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF NEVADA, LAS VEGAS

Dear Samuel J. Crumbine Consumer Protection Award Committee,

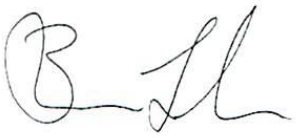
Anyone working in public health knows that the Las Vegas marketing slogan "What happens here, stays here" is far from reality. When an outbreak occurs in Las Vegas, it is front-page news around the country. The Southern Nevada Health District (SNHD) Environmental Health Division (EH) is responsible for protecting 43 million annual visitors and 2.3 million residents. Roughly one in eight Americans have visited Las Vegas in the last year and half of Americans have visited Las Vegas at some time during their life. When you combine this with the fact that every famous chef wants to open a flagship restaurant on the Las Vegas Strip and use cutting-edge food preparation methods, SNHD EH faces food safety challenges not seen elsewhere in the country.

After working with the University of Rochester on a pilot project in 2014, SNHD EH was awarded a 5-year, $1 million grant from the Centers for Disease Control and Prevention to implement a program to use real-time social media data to identify restaurants at increased risk of having food safety issues. When the system identified a restaurant as having a potential problem, Environmental Health Specialists conducted a routine inspection. Inspections conducted because of this innovative approach had a great number of violations and a downgrade rate, but it also allowed restaurants to be treated fairly when a false positive had occurred by not penalizing them simply because of something identified by an algorithm.

SNHD EH has a long history of cooperatively working with industry to solve problems and prevent illness. Starting with the makeup of the Board of Health and Health District Advisory Board, which includes industry representatives and an REHS, Southern Nevada's approach to environmental health is rooted in a collaboration. They regularly work with industry partners, such as the Nevada Resort Association and Nevada Restaurant Association, to find innovative ways to meet the ever-changing needs of industry while still providing protections for consumers. They are a partner with the University of Nevada, Las Vegas (UNLV) School of Public Health in training students. Many of their employees take advantage of tuition reimbursement to pursue an MPH and SNHD employees regularly speak in UNLV courses. SNHD hosts UNLV interns every semester, providing a hands-on component to their education that helps bring the real world into the classroom. UNLV faculty regularly speak at SNHD events as well, helping their employees to stay current with new developments in public health.

For the many listed above and the many more included in their application materials, I am highly supportive of the Southern Nevada Health District's Environmental Health Division's application to be recognized with the Samuel J. Crumbine Consumer Protection Award.

Sincerely,



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FDA U.S. FOOD & DRUG ADMINISTRATION
OFFICE OF REGULATORY AFFAIRS
OSCP DIVISION OF RETAIL FOOD PROTECTION

The Samuel J. Crumbine Award Panel

February 21, 2020

To Whom This May Concern:

It is my great honor to support the nomination of the Southern Nevada Health Division (SNHD), Las Vegas, NV for the Samuel J. Crumbine Consumer Protection Award. I have personally observed their professionalism, passion and dedication to retail food protection in Las Vegas and Clark county Nevada over the past 5 years. I am even more impressed at how positively they have impacted retail food protection programs in other jurisdictions across the United States. It is impossible to list all their contributions in this letter, but instead I have chosen a few of those that I believe are most significant.

SNHD is very active in practicing and promoting the FDA Voluntary National Retail Program Standards. Specifically, they have accomplished the following:

1. Completed an initial Self-Assessment of all Nine Standards in 2015 and currently working on an updated Self-Assessment of all Nine Standards to be completed in 2020.
2. They've met and successfully passed verification audits of Retail Program Standards 5 and 7.
3. They've conducted verification audits for Washoe County, NV on Retail Program Standards 3 and 5.
4. They participated as a mentee in the 2015 NACCHO Retail Program Standards Mentorship program. They continued to participate every year since 2016, providing noteworthy mentorship to 10 different state or local health jurisdictions from across the United States. In 2020, they are providing mentorship to two new jurisdictions.
5. SNHD actively participates in the Conference for Food Protection Committees and Councils, as well as offering workshops and training to jurisdictions across the United States.

6. They have consistently participated in the AFDO Retail Program Standards Grant program to make consistent progress towards meeting program standards, below are a few specific examples of projects they have completed:

   a. They've used grant funds to increase knowledge of their staff.

   b. They've created professionally done training videos for their stakeholders resulting in broader and better understanding of safe food handling practices.

   c. They've conducted sector specific risk factor data collections and implemented intervention strategies across Las Vegas and Clark county, Nevada.

In closing, Southern Nevada Health Division Food Program staff are game-changers. They constantly work to improve food safety in their jurisdiction and are always willing to assist others by sharing their successes and experience through mentorship, verification audits and presenting at seminars and conferences across the United States. The contributions they have made and will continue to make in the future are an inspiration to food safety professionals everywhere.

Respectfully,

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EXTENSION

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February 26, 2020

Samuel J. Crumbine Consumer Protection Award Jury
c/o The National Association of County and City Health Officials
1201 Eye Street, NW, 4th Floor
Washington, DC 20005

Dear Crumbine Award Jury Members:

The Southern Nevada Health District (SNHD) Division of Environmental Health is applying for the Samuel J. Crumbine Consumer Protection Award for Excellence in Food Protection at the Local Level, and I am pleased to submit this testimonial letter on behalf of the University of Nevada Reno Extension.

Extension is the outreach unit of the University of Nevada Reno, has offices in every county, and delivers non-degree, educational programs on a variety of topics including health and nutrition, economic and community development, horticulture and agriculture, youth development, and much more. We currently partner with the SNHD Environmental Health section to provide kitchen and classroom space for their special processes trainings.

The Southern Nevada Health District is one of the largest public health organizations in the United States. More than 72 percent of Nevada's total population of 2.7 million people resides in Clark County, which includes the City of Las Vegas. Their mission is to assess, protect, and promote the health, the environment, and the well-being of Southern Nevada communities, residents, and visitors.

The SNHD is committed to providing high quality food programs in southern Nevada as evidenced by some of the projects we have been able to work on together. For example:

- Extension-facilitated Southern Nevada Food Council meetings
  - SNHD Environmental Health (EH) has committed a staff person to serve as a Council liaison member which has fostered communication and information exchange between EH and Council members as well as meeting participants regulated by the SNHD.
  - Involvement in the Council also provides food safety related targeted outreach to non-regulated organizations including our food bank and other charitable organizations that receive donated food or give it away.

- SNHD and Extension have a partnership to provide a hands-on course regarding regulated special processes to SNHD inspectors including pH testing of sushi rice, making yogurt, canning acidified produce, and sous vide cooking.
- The SNHD partnered with Dr. Amilton de Mello, Extension State Specialist and UNR Assistant Professor, to create twenty short videos providing accurate, easy to understand food safety information needed to pass the SNHD food handler card exam. A link to the videos is on this page: https://www.southernnevadahealthdistrict.org/programs/food-handler-safety-program/

I look forward to hearing the recipients of the Crumbine Award. If I can provide any additional information in support of the SNHD's application, please contact me at 702.257.5542 or killiane@unce.unr.edu.

Sincerely,

Eric Killian
Southern Area Director
University of Nevada Reno Extension

First District Health Unit
www.fdhu.org

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BURKE COUNTY | 701.377.2316
MCHENRY COUNTY | 701.537.5732
MCLEAN COUNTY (GARRISON) | 701.463.2641
MCLEAN COUNTY (WASHBURN) | 701.462.3330
RENVILLE COUNTY | 701.756.6383
SHERIDAN COUNTY | 701.363.2506
WARD COUNTY (KENMARE) | 701.385.4328
WARD COUNTY (MINOT) | 701.852.1376

February 11, 2020

Samuel J. Crumbine Consumer Protection Award Jury
c/o The National Association of County and City Health Officials
1201 Eye Street, NW, 4th Floor
Washington, DC 20005

Dear Crumbine Award Jury Members:

The Southern Nevada Health District (SNHD) Division of Environmental Health is applying for the Samuel J. Crumbine Consumer Protection Award for Excellence in Food Protection at the Local Level, and I am pleased to submit this testimonial letter on behalf of the First District Health Unit (FDHU).

The FDHU is a local regulatory agency comprised of seven rural counties in North Dakota, covering a total area of 10,618 square miles throughout the state. FDHU's mission is to make a positive impact on the health and welfare of the community through service, education, prevention and collaborative activities.

The FDHU enrolled in the Voluntary National Retail Food Regulatory Program Standards (VNRFRPS) in October 2016 and, shortly thereafter, applied to the NACCHO mentorship program (Cohort 6). SNHD was assigned to be our mentor and they guided us in amending our action plan to be more realistic and attainable. Through monthly calls and a Las Vegas site visit at SNHD, our department gained valuable information regarding how to consistently work towards completion of an initial self-assessment for Standards 1-9, as we had no prior experience with the VNRFRPS. The self-assessment was completed in May 2017, earlier than anticipated, thanks to SNHD's assistance.

During the course of the 2016-2017 NACCHO mentorship program, SNHD showed us, by example, what could be possible, programmatically, if we continued to work with the VNRFRPS. They encouraged us to apply for grant funding to be able to continue our work and with their assistance, we applied for the FDA Cooperative Agreement in 2017, two AFDO grant opportunities, and the NACCHO Mentorship again the following year. SNHD has significantly altered our course of direction regarding our work in the VNRFRPS and we are so thankful to have been able to collaborate with them. Their guidance and continued partnership has allowed us to be front runners in our state and we've recently presented at our state conference regarding our work with the VNRFRPS.

In October 2017, as mentioned above, FDHU applied to the NACCHO Mentorship program for a second year and were fortunate to be paired with the SNHD again. The mentorship was more productive the second year as both health units were familiar with each other and we were able to start working on the goals listed in the action plan immediately. With SNHD's guidance, FDHU began to work towards meeting Standard 1 and a

First District Health Unit
www.fdhu.org

BOTTINEAU COUNTY | 701.228.3101
BURKE COUNTY | 701.377.2316
MCHENRY COUNTY | 701.537.5732
MCLEAN COUNTY (GARRISON) | 701.463.2641
MCLEAN COUNTY (WASHBURN) | 701.462.3330
RENVILLE COUNTY | 701.756.6383
SHERIDAN COUNTY | 701.363.2506
WARD COUNTY (KENMARE) | 701.385.4328
WARD COUNTY (MINOT) | 701.852.1376

verification audit was completed on May 3, 2019 demonstrating Standard 1 was met. During that same year, SNHD assisted us in preparing for data collection for our initial risk factor study and by 2019 FDHU began to collect restaurant data as a result of the details SNHD provided regarding their previous experience with data collection.

SNHD has been instrumental to FDHU's success in working towards conformance with the VNRFRPS. We are grateful for the continued relationship with SNHD, long after the NACCHO Cohorts 6 & 7 Mentorship Programs have ended. SNHD has continued to be available for help with grant applications, budgets, report writing, and document submission, all of which FDHU's environmental health department has had no prior experience.

We feel strongly that the Southern Nevada Health District is deserving of the Samuel J. Crumbine Consumer Protection Award for their continual dedication to excel and improve their local food protection program, for their innovative outreach efforts to interact with industry and consumers, and for the exemplary mentorship they continue to provide assisting local health units throughout the nation, all in an effort to improve public health protection.

I look forward to hearing the recipients of the Crumbine Award. If I can provide any additional information in support of the SNHD's application, please contact me at (701) 852-1376 or jheckman@nd.gov.

Sincerely,

James K. Heckman

James K. Heckman
Director of Environmental Health

JVC FOOD SAFETY SPECIALISTS INC

Specializing in Food & Beverage Safety consulting within a casino atmosphere

January 29, 2020

Samuel J. Crumbine Consumer Protection Award Jury
c/o The National Association of County and City Health Officials
1201 Eye Street, NW, 4th Floor
Washington, DC 20005

Dear Crumbine Award Jury Members:

With the understanding that the Southern Nevada Health District (SNHD) Division of Environmental Health (EHD) is applying for the Samuel J. Crumbine Consumer Protection Award for Excellence in Food Protection at the Local Level, I am extremely honored to submit this testimonial letter on behalf of my Food and Beverage Safety Sanitation firm, JVC Food Safety Specialists, Inc.

JVC Food Safety Specialists, Inc. is devoted to providing unsurpassed Food and Beverage Safety, Sanitation, Environmental Health, and Risk Assessment consultation based on regulations from governing jurisdictions throughout the United States. Comparable to the SNHD, JVC Food Safety Specialists' primary goal is to ensure, promote, and safeguard overall public health within industry.

The SNHD is one of the largest public health organizations in the United States. Southern Nevada has 2.2 million residents (72 percent of Nevada's population), many of whom reside in Clark County and the City of Las Vegas. There is no question that the SNHD's mission is to assess, protect, and promote the health, the environment, and the well-being of Southern Nevada communities, residents, and visitors. As JVC Food Safety Specialists Inc. has expanded throughout the United States and worked with other jurisdictions, I have not witnessed any other health authority that approaches excellence in food safety at the same level as SNHD's format.

The SNHD has numerous specialized programs in food safety and general environmental health. It is understandable that sustained, documented excellence was achieved between 2014-2020. This includes specific achievements and evidence of continual improvements within comprehensive programs such as the food program.

SNHD demonstrates improvements in planning, managing, and evaluating comprehensive programs with targeted outreach through public workshops and training forums. This fosters communication and information exchange among the regulators, industry, and consumer representatives. They utilize innovative and effective methods to solve problems and identify ways to reduce risk factors that are known to cause foodborne illness.

In reference to my recommendation for the Crumbine Award, I absolutely feel that the SNHD representation of public and environment health, specifically excellence in food safety, sufficiently meets and exceeds all requirements in receiving this award. If you require any further information, please contact me any time.

Sincerely,
James (Jimmy) Vigilante REHS/RS – President

James (Jimmy) Vigilante
4912 Grey Mesa Street Las Vegas, Nevada 89149
702-412-3333 Fax - 702-476-8988
www.JVCFoodSafety.net JimmyVigilante@JVCFoodSafetySpecialists.net

February 4, 2020

Samuel J. Crumbine Consumer Protection Award Jury
c/o The National Association of County and City Health Officials
1201 Eye Street, NW, 4th Floor
Washington, DC 20005

Dear Crumbine Award Jury Members:

The Southern Nevada Health District (SNHD) Division of Environmental Health is applying for the Samuel J. Crumbine Consumer Protection Award for Excellence in Food Protection at the Local Level, and I am pleased to submit this testimonial letter on behalf of MGM Grand Las Vegas.

MGM Grand Las Vegas has provided world-class dining experiences to Las Vegas locals and visitors from around the world for more than 25 years. Our iconic brand is recognized globally as a quintessentially Las Vegas experience, offering more than twenty dining establishments ranging from casual eateries to Michelin three star, Forbes Five-Star, and AAA Five Diamond rated restaurants.

MGM Grand Las Vegas is very appreciative of and deeply values the partnership we have forged over the years with the SNHD. Our collaboration with the SNHD is premised the shared priority of providing unparallel dining experiences calibrated to the highest standards of food safety.

The SNHD and its Division of Environmental Health team are leaders in food safety, continuously researching and applying new techniques and providing over the years open-source monthly and quarterly training sessions for regulated industry. This level of collaboration and access to training offered by our local public health authority his highly valued by regulated food establishments, particularly resort hotels -- many of which undertake their own food safety training and maintain rigorous self-inspection protocols.

The SNHD has always maintained excellence when it comes to public health standards and MGM Grand Las Vegas has been part of that sustained excellence. Over the past few years, MGM Grand Las Vegas has hosted several SNHD environmental health specialists and representatives of food safety management, some of the best in the industry, to discuss with our operators and team members new and emerging trends in food safety, upcoming modifications to standards or protocols, and mutually beneficial dialogue about best practices and inspection outcomes.

The SNHD has consistently demonstrated to MGM Grand Las Vegas and the local resort hotel industry their willingness to go above and beyond when conveying a public health and food safety message. The SNHD routinely provides access to streamlined food safety and environmental health training, whether through formal work sessions and industry gatherings, or through informal dialogue and individualized meetings.

The SNHD's willingness to listen, understand, and work collectively with resort hotel partners to ensure food safety goals are realized without detrimental impact to the distinct qualities that make the dining industry in Las Vegas so unique and successful has been -- and will continue to be -- a great source of value and appreciation to us.

Thank you kindly for your thoughtful consideration of my letter of recommendation. If I can provide any additional information in support of the SNHD's application, please don't hesitate to contact me at (702) 203-4193 or at dcurtis@lv.mgmgrand.com.

Sincerely,

DuBois L. Curtis
Food Safety and Sanitation Manager
MGM Resorts International

3799 LAS VEGAS BOULEVARD SOUTH LAS VEGAS, NEVADA 89109 PHONE 702.891.1111
mgmgrand.com

February 6, 2020

Samuel J. Crumbine Consumer Protection Award Jury
c/o The National Association of County and City Health Officials
1201 Eye Street, NW, 4th Floor
Washington, DC 20005

Dear Crumbine Award Jury Members:

The Southern Nevada Health District (SNHD) Division of Environmental Health is applying for the Samuel J. Crumbine Consumer Protection Award for Excellence in Food Protection at the Local Level, and I am pleased to submit this testimonial letter on behalf of the Southern Nevada Health District.

The City of North Las Vegas is the third largest city in Nevada, and is the most diverse community in the state. Our 262,000 residents enjoy a rapidly growing restaurant and mobile food scene, which is supported by the Southern Nevada Health District.

The Southern Nevada Health District is one of the largest public health organizations in the United States. More than 72 percent of Nevada's total population of 2.7 million people resides in Clark County, which includes the City of North Las Vegas. Their mission is to assess, protect, and promote the health, the environment, and the well-being of Southern Nevada communities, residents, and visitors.

The City of North Las Vegas has developed a reputation for its SNHD has embraced our practices and has become a valuable partner. The District's Food Operations and Plan Review staff took the time to meet with the mayor of North Las Vegas and his staff to discuss ways the SNHD and the City of North Las Vegas could streamline the plan review process for food facilities to keep up with our "fast and faster" approach to business while also ensuring food safety standards were not compromised in the process. I appreciate their willingness to come down to North Las Vegas City Hall and discuss the issue with city staff.

The SNHD is also very responsive and willing to work on proactive and innovative solutions with stakeholders when potential issues arise. After complaints of unpermitted food vendors at schools were made by a group of permitted ice cream trucks, I asked SNHD Food Operations to set up meetings with the owners of these ice cream trucks. SNHD Food Operations staff developed an educational campaign for unpermitted food vendors geared specifically for those schools. A food mobile unit sticker was developed to better identify food mobile units that are permitted to operate at the schools. The District also held meetings with administrators at the schools, and SNHD Food Operations conducted regular patrols of the schools in the affected area.

I believe this was a successful collaboration between stakeholders, showing how the Southern Nevada Health District is a partner with the community.

I look forward to hearing who will be the recipients of the Crumbine Award. If I can provide any additional information in support of the SNHD's application, please contact me at 702-633-1010.

Sincerely,

Scott Black

Scott Black
Councilman – Ward 3

Steve Sisolak
Governor

Richard Whitley, MS
Director

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Division of Public and Behavioral Health
Helping people. It's who we are and what we do.

Lisa Sherych
Administrator

Ihsan Azzam, Ph.D., M.D.
Chief Medical Officer

January 29, 2020

Samuel J. Crumbine Consumer Protection Award Jury
c/o The National Association of County and City Health Officials
1201 Eye Street, NW, 4th Floor
Washington, DC 20005

Dear Crumbine Award Jury Members:

The Southern Nevada Health District (SNHD) Division of Environmental Health is applying for the Samuel J. Crumbine Consumer Protection Award for Excellence in Food Protection at the Local Level, and I am pleased to submit this testimonial letter on behalf of Nevada Division of Public and Behavioral Health, Environmental Health Section (DPBH, EHS)

The Nevada Division of Public and Behavioral Health is the health authority for the State of Nevada. DPBH, EHS, is one of four health authorities providing services to 17 counties. Our state encompasses a wide variety of communities from rural to urban with a wide range of public health programs. Our partnership with Southern Nevada Health District involves the development and maintenance of the public health infrastructure which includes a cross-sector approach with a common plan. Our programs work collaboratively to foster quality improvement, performance management, accountability, transparency and capacity to deliver essential public health services.

The Southern Nevada Health District is one of the largest public health organizations in the United States. More than 72 percent of Nevada's total population of 2.7 million people resides in Clark County, which includes the City of Las Vegas. Their mission is to assess, protect, and promote the health, the environment, and the well-being of Southern Nevada communities, residents, and visitors.

I appreciate SNHD's Food Program working with the State Environmental Health program on a variety of issues. One example is Las Vegas sees a lot of the new challenges first in the state when it comes to food safety issues such as CBD and Kava being added to food. SNHD organized many statewide conference calls with all Food Programs in the State of Nevada to discuss these challenges and what they are doing in their jurisdiction. This allows all the food programs in the state to become aware of these issues and discuss them so that all the Food Programs can have a consistent message on a new and difficult issue.

I look forward to hearing the recipients of the Crumbine Award. If I can provide any additional information in support of the SNHD's application, please contact me at (775) 687-7553 or thayes@health.nv.gov.

Sincerely,

Teresa Hayes, R.E.H.S
Environmental Health Program Manager 3

4150 Technology Way, Suite 300 • Carson City, Nevada 89706
775-684-4200 • Fax 775-687-7570 • dpbh.nv.gov

The Samuel J. Crumbine Consumer Protection Award
for Excellence in Food Protection at the Local Level
2020

Southern Nevada Health District

APPENDICES A through U

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ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
ANNUAL/ADMINISTRATIVE FEES				
FOOD OPERATIONS				
1000	MAIN KITCHEN	211	2.71	
1001	MAIN KITCHEN (1 DRIVE-UP)	277	2.71	
1002	MAIN KITCHEN (2 DRIVE-UP)	343	2.71	
1003	RESTAURANT	211	2.71	
1004	RESTAURANT (1 DRIVE-UP)	277	2.71	
1005	RESTAURANT (2 DRIVE-UP)	343	2.71	
1006	RESTAURANT / TAKE OUT	211	2.71	
1007	RESTAURANT / TAKE OUT (1 DRIVE-UP)	277	2.71	
1008	RESTAURANT / TAKE OUT (2 DRIVE-UP)	343	2.71	
1009	SNACK BAR	211	2.71	
1010	SNACK BAR (1 DRIVE-UP)	277	2.71	
1011	SNACK BAR (2 DRIVE-UP)	343	2.71	
1012	BUFFET (DAILY)	211	2.71	
1013	BARBEQUE	211	2.71	
1014	BARBEQUE (1 DRIVE-UP)	277	2.71	
1015	BARBEQUE (2 DRIVE-UP)	343	2.71	
1016	DRINKING ESTABLISHMENT	211	2.71	
1017	BEER BAR	211	2.71	
1018	BANQUET KITCHEN < 1,000 SF	558		
1019	BANQUET KITCHEN 1000 - 2,999 SF	971		
1020	BANQUET KITCHEN 3,000 - 4,999 SF	1085		
1021	BANQUET KITCHEN 5,000 - 9,999 SF	1196		
1022	BANQUET KITCHEN = 10,000 SF	1308		
1023	BANQUET SUPPORT < 1,000 SF	558		
1024	BANQUET SUPPORT 1000 - 2,999 SF	971		
1025	BANQUET SUPPORT 3,000 - 4,999 SF	1085		
1026	BANQUET SUPPORT 5,000 - 9,999 SF	1196		
1027	BANQUET SUPPORT = 10,000	1308		
1028	SPECIAL KITCHEN < 1,000 SF	558		
1029	SPECIAL KITCHEN 1000 - 2,999 SF	971		
1030	SPECIAL KITCHEN 3,000 - 4,999 SF	1085		
1031	SPECIAL KITCHEN 5,000 - 9,999 SF	1196		
1032	SPECIAL KITCHEN = 10,000 SF	1308		
1033	KITCHEN BAKERY < 1,000 SF	558		
1034	KITCHEN BAKERY 1000 - 2,999 SF	971		
1035	KITCHEN BAKERY 3,000 - 4,999 SF	1085		
1036	KITCHEN BAKERY 5,000 - 9,999 SF	1196		

Southern Nevada Health District

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
1037	KITCHEN BAKERY = 10,000 SF	1308		
1038	MEAT < 1,000 SF	558		
1039	MEAT 1000 - 2,999 SF	971		
1040	MEAT 3,000 - 4,999 SF	1085		
1041	MEAT 5,000 - 9,999 SF	1196		
1042	MEAT = 10,000 SF	1308		
1043	VEGETABLE PREP < 1,000 SF	558		
1044	VEGETABLE PREP 1000 - 2,999 SF	971		
1045	VEGETABLE PREP 3,000 - 4,999 SF	1085		
1046	VEGETABLE PREP 5,000 - 9,999 SF	1196		
1047	VEGETABLE PREP = 10,000 SF	1308		
1048	PANTRY < 1,000 SF	558		
1049	PANTRY 1000 - 2,999 SF	971		
1050	PANTRY 3,000 - 4,999 SF	1085		
1051	PANTRY 5,000 - 9,999 SF	1196		
1052	PANTRY = 10,000 SF	1308		
1053	GARDE MANGER < 1,000 SF	558		
1054	GARDE MANGER 1000 - 2,999 SF	971		
1055	GARDE MANGER 3,000 - 4,999 SF	1085		
1056	GARDE MANGER 5,000 - 9,999 SF	1196		
1057	GARDE MANGER = 10,000 SF	1308		
1058	MEAT /POULTRY/ SEAFOOD < 1000 SF	227		
1059	MEAT /POULTRY/ SEAFOOD 1000 - 2999 SF	417		
1060	MEAT /POULTRY/ SEAFOOD 3000 - 4999 SF	695		
1061	MEAT /POULTRY/ SEAFOOD 5000 - 9999 SF	805		
1062	MEAT /POULTRY/ SEAFOOD = 10000 SF	935		
1063	CONFECTION < 1000 SF	227		
1064	CONFECTION 1000 - 2999 SF	417		
1065	CONFECTION 3000 - 4999 SF	695		
1066	CONFECTION 5000 - 9999 SF	805		
1067	CONFECTION = 10000 SF	935		
1068	PRODUCE MARKET < 1000 SF	227		
1069	PRODUCE MARKET 1000 - 2999 SF	417		
1070	PRODUCE MARKET 3000 - 4999 SF	695		
1071	PRODUCE MARKET 5000 - 9999 SF	805		
1072	PRODUCE MARKET = 10000 SF	935		
1073	BAKERY SALES < 1000 SF	227		
1074	BAKERY SALES 1000 - 2999 SF	417		
1075	BAKERY SALES 3000 - 4999 SF	695		
1076	BAKERY SALES 5000 - 9999 SF	805		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
1077	BAKERY SALES = 10000 SF	935		
1078	PORTABLE BANQUETBAR	0	50	
1079	PORTABLE UNIT - OUTDOOR	296		
1080	PORTABLE UNIT - INDOOR	296		
1081	SELF-SERVICE PRE-PACKAGED FOOD TRUCK	244		
1083	MOBILE FOOD SERVICE	244		
1084	FROZEN MEAT SALES	244		
1085	FOOD DELIVERY TRUCK - HIGH RISK	244		
1086	MOBILE ICE CREAM/CANDY	139		
1087	GROCERY STORE SAMPLING	290		
1088	CONCESSIONS - LOW RISK	94		
1089	CONCESSIONS - HIGH RISK	189		
1090	CATERER	211		
1091	CHILDCARE KITCHENS	121		
1092	ANNUAL ITINERANT - LOW RISK	521		
1093	ANNUAL ITINERANT - HIGH RISK	782		
1094	FARMER'S MARKET - SAMPLING	290		
1095	FARMER'S MARKET - PROCESSED PRODUCT	290		
1096	FARMER'S MARKET - LOW RISK	290		
1097	FARMER'S MARKET - HIGH RISK	725		
1098	SEASONAL PERMIT 0 - 4 MONTHS	100		
1099	SEASONAL PERMIT NOT TO EXCEED 5 MONTHS	150		
1100	SEASONAL PERMIT NOT TO EXCEED 6 MONTHS	200		
1101	SEASONAL PERMIT NOT TO EXCEED 7 MONTHS	250		
1102	SEASONAL PERMIT NOT TO EXCEED 8 MONTHS	300		
1103	ELEMENTARY SCHOOL KITCHENS	121		
1104	MIDDLE SCHOOL KITCHENS	121		
1105	HIGH SCHOOL KITCHENS	121		
1110	MEAT/POULTRY/SEAFOOD=10000SF W/ FED INSP MEAT	118		
1115	INSTITUTIONAL FOOD SERVICE - SMALL	121		
1116	INSTITUTIONAL FOOD SERVICE - LARGE	121		
1117	WATER STORE	94		
1118	ELEMENTARY SCHOOL KITCHENS (NON USDA)	121		
1119	MIDDLE SCHOOL KITCHENS (NON USDA)	121		
1120	HIGH SCHOOL KITCHENS (NON USDA)	121		
1121	REMOTE SERVICE SITE	211		
1122	PORTABLE UNIT - TCS	296		
1123	MOBILE PRODUCE	139		
1124	ANNUAL ITINERANT - LOW RISK - MAJOR	521		
1125	ANNUAL ITINERANT - HIGH RISK - MAJOR	782		

Southern Nevada Health District

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
1200	BOTTLING PLANT < 1,000 SF	417		
1201	BOTTLING PLANT 1000 - 2,999 SF	695		
1202	BOTTLING PLANT 3,000 - 4,999 SF	1391		
1203	BOTTLING PLANT 5,000 - 9,999 SF	1615		
1204	BOTTLING PLANT = 10,000 SF	1871		
1205	FOOD PROCESSING < 1,000 SF	417		
1206	FOOD PROCESSING 1000 - 2,999 SF	695		
1207	FOOD PROCESSING 3,000 - 4,999 SF	1391		
1208	FOOD PROCESSING 5,000 - 9,999 SF	1615		
1209	FOOD PROCESSING = 10,000 SF	1871		
1210	MEAT < 1,000 SF	417		
1211	MEAT 1000 - 2,999 SF	695		
1212	MEAT 3,000 - 4,999 SF	1391		
1213	MEAT 5,000 - 9,999 SF	1615		
1214	MEAT = 10,000 SF	1871		
1215	BAKERY < 1,000 SF	417		
1216	BAKERY 1000 - 2,999 SF	695		
1217	BAKERY 3,000 - 4,999 SF	1391		
1218	BAKERY 5,000 - 9,999 SF	1615		
1219	BAKERY = 10,000 SF	1871		
1220	ICE PLANT < 1,000 SF	417		
1221	ICE PLANT 1000 - 2,999 SF	695		
1222	ICE PLANT 3,000 - 4,999 SF	1391		
1223	ICE PLANT 5,000 - 9,999 SF	1615		
1224	ICE PLANT = 10,000 SF	1871		
1225	CANDY PROCESSOR < 1,000 SF	417		
1226	CANDY PROCESSOR 1000 - 2,999 SF	695		
1227	CANDY PROCESSOR 3,000 - 4,999 SF	1391		
1228	CANDY PROCESSOR 5,000 - 9,999 SF	1615		
1229	CANDY PROCESSOR = 10,000 SF	1871		
1230	ICE CREAM PROCESSOR < 1,000 SF	417		
1231	ICE CREAM PROCESSOR 1000 - 2,999 SF	695		
1232	ICE CREAM PROCESSOR 3,000 - 4,999 SF	1391		
1233	ICE CREAM PROCESSOR 5,000 - 9,999 SF	1615		
1234	ICE CREAM PROCESSOR = 10,000 SF	1871		
1235	GAME PROCESSOR < 1,000 SF	417		
1236	GAME PROCESSOR 1000 - 2,999 SF	695		
1237	GAME PROCESSOR 3,000 - 4,999 SF	1391		
1238	GAME PROCESSOR 5,000 - 9,999 SF	1615		
1239	GAME PROCESSOR = 10,000 SF	1871		

Southern Nevada Health District

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
1240	FEDERALLY INSPECTED MEAT < 1,000 SF	417		
1241	FEDERALLY INSPECTED MEAT 1000 - 2,999 SF	695		
1242	FEDERALLY INSPECTED MEAT 3,000 - 4,999 SF	1391		
1243	FEDERALLY INSPECTED MEAT 5,000 - 9,999 SF	1615		
1244	FEDERALLY INSPECTED MEAT = 10,000 SF	1871		
1245	DELI/COMMISSARY PROCESSOR < 1,000 SF	417	2.71	
1246	DELI/COMMISSARY PROCESSOR 1000 - 2,999 SF	695	2.71	
1247	DELI/COMMISSARY PROCESSOR 3,000 - 4,999 SF	1391	2.71	
1248	DELI/COMMISSARY PROCESSOR 5,000 - 9,999 SF	1615	2.71	
1249	DELI/COMMISSARY PROCESSOR = 10,000 SF	1871	2.71	
1256	POULTRY PROCESSOR < 1,000 SF	417		
1257	POULTRY PROCESSOR 1000 - 2,999 SF	695		
1258	POULTRY PROCESSOR 3,000 - 4,999 SF	1391		
1259	POULTRY PROCESSOR 5,000 - 9,999 SF	1615		
1260	POULTRY PROCESSOR = 10,000	1871		
1300	MARKET < 1,000 SF	227		
1301	MARKET 1000 - 2,999 SF	417		
1302	MARKET 3,000 - 4,999 SF	695		
1303	MARKET 5,000 - 9,999 SF	805		
1304	MARKET = 10,000 SF	935		
1305	REFRIGERATED STORAGE < 1,000 SF	227		
1306	REFRIGERATED STORAGE 1000 - 2,999 SF	417		
1307	REFRIGERATED STORAGE 3,000 - 4,999 SF	695		
1308	REFRIGERATED STORAGE 5,000 - 9,999 SF	805		
1309	REFRIGERATED STORAGE = 10,000 SF	935		
1310	PACKAGED STORAGE < 1,000 SF	227		
1311	PACKAGED STORAGE 1000 - 2,999 SF	417		
1312	PACKAGED STORAGE 3,000 - 4,999 SF	695		
1313	PACKAGED STORAGE 5,000 - 9,999 SF	805		
1314	PACKAGED STORAGE = 10,000 SF	935		
1315	HEALTH FOOD < 1,000 SF	227		
1316	HEALTH FOOD 1000 - 2,999 SF	417		
1317	HEALTH FOOD 3,000 - 4,999 SF	695		
1318	HEALTH FOOD 5,000 - 9,999 SF	805		
1319	HEALTH FOOD = 10,000 SF	935		
1320	COMMISSARY < 1,000 SF	227		
1321	COMMISSARY 1000 - 2,999 SF	417		
1322	COMMISSARY 3,000 - 4,999 SF	695		
1323	COMMISSARY 5,000 - 9,999 SF	805		
1324	COMMISSARY = 10,000 SF	935		

Southern Nevada Health District

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
1325	DISCOUNT STORE < 1,000 SF	227		
1326	DISCOUNT STORE 1000 - 2,999 SF	417		
1327	DISCOUNT STORE 3,000 - 4,999 SF	695		
1328	DISCOUNT STORE 5,000 - 9,999 SF	805		
1329	DISCOUNT STORE = 10,000 SF	935		
1330	DRY STORAGE / WAREHOUSE < 1,000 SF	227		
1331	DRY STORAGE / WAREHOUSE 1000 - 2,999 SF	417		
1332	DRY STORAGE / WAREHOUSE 3,000 - 4,999 SF	695		
1333	DRY STORAGE / WAREHOUSE 5,000 - 9,999 SF	805		
1334	DRY STORAGE / WAREHOUSE = 10,000 SF	935		
1335	VENDING MACHINE COMPANY < 1,000 SF	227		
1336	VENDING MACHINE COMPANY 1000 - 2,999 SF	417		
1337	VENDING MACHINE COMPANY 3,000 - 4,999 SF	695		
1338	VENDING MACHINE COMPANY 5,000 - 9,999 SF	805		
1339	VENDING MACHINE COMPANY = 10,000 SF	935		
1340	VENDING MACHINE	0	75	
1400	FARMER'S MARKET EVENT COORDINATOR	290		
1401	SWAP MEET	521	2.71	
1402	FOOD COURT	521	2.71	
1403	SUMMER FOOD PROGRAM	0	118	
TEMPORARY EVENTS				
1501	ANNUAL EVENT COORDINATOR	1160		
1502	TEMPORARY FOOD ESTABLISHMENT 1 - 5 DAYS	0	131	
1503	TEMPORARY FOOD ESTABLISHMENT 6 - 10 DAYS	0	160	
1504	TEMPORARY FOOD ESTABLISHMENT 11 - 14 DAYS	0	198	
1505	TASTE EVNT,BEV,1ST 10 BTHS,THEN EA 10 BTHS=1	290	120	
1506	TASTE EVNT,FOOD/FOOD&BEV,5 BTHS=1	290	120	
1508	TASTE EVNT, BEV, ADD'L 10 BOOTHS ONLY	0	120	
1509	TASTE EVNT, FOOD/FOOD&BEV,ADD'L 5 BOOTHS ONLY	0	120	
1510	EVENT COORDINATOR AND BOOTH UNITS	230	6	
1511	TASTING/SAMPLING EVENT - ADD'L BOOTHS ONLY	0	6	
1512	EVENT COORDINATOR 2-10 VENDOR BOOTHS	145		
1513	EVENT COORDINATOR 11-59 VENDOR BOOTHS	290		
1514	EVENT COORDINATOR 60+ VENDOR BOOTHS	290		
1515	EVENT COORDINATOR ADD'L HRS 60+ VENDOR BOOTHS	0	118	7000
MISCELLANEOUS				
1900	INSPECTION FOLLOWING DOWNGRADE TO "C"	1200		
1901	FAILED FOOD FIELD VST OR INSP RESULT IN CLOSE	1400		
1902	AFTER HOURS RE-INSPECTION	479		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
1903	INSP RESULT IN CLOSE (IHH SEWAGE)	1400		
SCHOOLS/INSITITUTIONS				
4200	CHILDREN'S HOME / INSTITUTION	10		
4204	ELEMENTARY SCHOOL	118		
4205	MIDDLE SCHOOL	118		
4206	HIGH SCHOOL	118		
4207	SUMMER CAMPS	10		
4208	SCHOOL/INSTITUTION REINSPECTION FEE	239		
4209	FAILED SCHOOL/INST FLD VST/INSP RES IN CLOSE	716		
4300	FAMILY CARE HOME 1-6 CHILDREN	118		
4301	GROUP CARE HOME 7-12 CHILDREN	239		
4302	CHILDCARE CENTERS >12	354		
4303	CHILDCARE SPECIAL EVENT 1-7 DAYS	211		
4304	CHILDCARE REINSPECTION FEE	239		
4305	FAILED CHILDCARE FLD VST/INSP RES IN CLOSE	716		
PLAN REVIEW FEES				
FOOD OPERATIONS				
5000	FPR - MAIN KITCHEN	398	2.4	
5001	FPR - MAIN KITCHEN (1 DRIVE-UP)	477	2.4	
5002	FPR - MAIN KITCHEN (2 DRIVE-UP)	556	2.4	
5003	FPR - RESTAURANT	398	2.4	
5004	FPR - RESTAURANT (1 DRIVE-UP)	477	2.4	
5005	FPR - RESTAURANT (2 DRIVE-UP)	556	2.4	
5006	FPR - RESTAURANT / TAKE OUT	398	2.4	
5007	FPR - RESTAURANT / TAKE OUT (1 DRIVE-UP)	477	2.4	
5008	FPR - RESTAURANT / TAKE OUT (2 DRIVE-UP)	556	2.4	
5009	FPR - SNACK BAR	398	2.4	
5010	FPR - SNACK BAR (1 DRIVE-UP)	477	2.4	
5011	FPR - SNACK BAR (2 DRIVE-UP)	556	2.4	
5012	FPR - BUFFET (DAILY)	398	2.4	
5013	FPR - BARBEQUE	398	2.4	
5014	FPR - BARBEQUE (1 DRIVE-UP)	477	2.4	
5015	FPR - BARBEQUE (2 DRIVE-UP)	556	2.4	
5016	FPR - DRINKING ESTABLISHMENT	398	2.4	
5017	FPR - BEER BAR	398	2.4	
5018	FPR - BANQUET KITCHEN < 1,000 SF	869		
5019	FPR - BANQUET KITCHEN 1000 - 2,999 SF	1158		
5020	FPR - BANQUET KITCHEN 3,000 - 4,999 SF	1449		
5021	FPR - BANQUET KITCHEN 5,000 - 9,999 SF	1739		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
5022	FPR - BANQUET KITCHEN = 10,000 SF	2029		
5023	FPR - BANQUET SUPPORT < 1,000 SF	869		
5024	FPR - BANQUET SUPPORT 1000 - 2,999 SF	1158		
5025	FPR - BANQUET SUPPORT 3,000 - 4,999 SF	1449		
5026	FPR - BANQUET SUPPORT 5,000 - 9,999 SF	1739		
5027	FPR - BANQUET SUPPORT = 10,000 SF	2029		
5028	FPR - SPECIAL KITCHEN < 1,000 SF	869		
5029	FPR - SPECIAL KITCHEN 1000 - 2,999 SF	1158		
5030	FPR - SPECIAL KITCHEN 3,000 - 4,999 SF	1449		
5031	FPR - SPECIAL KITCHEN 5,000 - 9,999 SF	1739		
5032	FPR - SPECIAL KITCHEN = 10,000	2029		
5033	FPR - KITCHEN BAKERY < 1,000 SF	869		
5034	FPR - KITCHEN BAKERY 1000 - 2,999 SF	1158		
5035	FPR - KITCHEN BAKERY 3,000 - 4,999 SF	1449		
5036	FPR - KITCHEN BAKERY 5,000 - 9,999 SF	1739		
5037	FPR - KITCHEN BAKERY = 10,000 SF	2029		
5038	FPR - MEAT < 1,000 SF	869		
5039	FPR - MEAT 1000 - 2,999 SF	1158		
5040	FPR - MEAT 3,000 - 4,999 SF	1449		
5041	FPR - MEAT 5,000 - 9,999 SF	1739		
5042	FPR - MEAT = 10,000 SF	2029		
5043	FPR - VEGETABLE PREP < 1,000 SF	869		
5044	FPR - VEGETABLE PREP 1000 - 2,999 SF	1158		
5045	FPR - VEGETABLE PREP 3,000 - 4,999 SF	1449		
5046	FPR - VEGETABLE PREP 5,000 - 9,999 SF	1739		
5047	FPR - VEGETABLE PREP = 10,000 SF	2029		
5048	FPR - PANTRY < 1,000 SF	869		
5049	FPR - PANTRY 1000 - 2,999 SF	1158		
5050	FPR - PANTRY 3,000 - 4,999 SF	1449		
5051	FPR - PANTRY 5,000 - 9,999 SF	1739		
5052	FPR - PANTRY = 10,000 SF	2029		
5053	FPR - GARDE MANGER < 1,000 SF	869		
5054	FPR - GARDE MANGER 1000 - 2,999 SF	1158		
5055	FPR - GARDE MANGER 3,000 - 4,999 SF	1449		
5056	FPR - GARDE MANGER 5,000 - 9,999 SF	1739		
5057	FPR - GARDE MANGER = 10,000 SF	2029		
5058	FPR - MEAT /POULTRY/ SEAFOOD < 1000 SF	869		
5059	FPR - MEAT /POULTRY/ SEAFOOD 1000 - 2999 SF	1158		
5060	FPR - MEAT /POULTRY/ SEAFOOD 3000 - 4999 SF	1449		
5061	FPR - MEAT /POULTRY/ SEAFOOD 5000 - 9999 SF	1739		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
5062	FPR - MEAT /POULTRY/ SEAFOOD = 10000 SF	2029		
5063	FPR - CONFECTION < 1000 SF	869		
5064	FPR - CONFECTION 1000 - 2999 SF	1158		
5065	FPR - CONFECTION 3000 - 4999 SF	1449		
5066	FPR - CONFECTION 5000 - 9999 SF	1739		
5067	FPR - CONFECTION = 10000 SF	2029		
5068	FPR - PRODUCE MARKET < 1000 SF	869		
5069	FPR - PRODUCE MARKET 1000 - 2999 SF	1158		
5070	FPR - PRODUCE MARKET 3000 - 4999 SF	1449		
5071	FPR - PRODUCE MARKET 5000 - 9999 SF	1739		
5072	FPR - PRODUCE MARKET = 10000 SF	2029		
5073	FPR - BAKERY SALES < 1000 SF	869		
5074	FPR - BAKERY SALES 1000 - 2999 SF	1158		
5075	FPR - BAKERY SALES 3000 - 4999 SF	1449		
5076	FPR - BAKERY SALES 5000 - 9999 SF	1739		
5077	FPR - BAKERY SALES = 10000 SF	2029		
5078	FPR - PORTABLE BANQUET BAR	290	94	
5079	FPR - PORTABLE UNIT - OUTDOOR	290	94	
5080	FPR - PORTABLE UNIT - INDOOR	290	94	
5081	FPR - SELF-SERVICE PRE-PACKAGED FOOD TRUCK	391		
5083	FPR - MOBILE FOOD SERVICE	479		
5084	FPR - FROZEN MEAT SALES	239		
5085	FPR - FOOD DELIVERY TRUCK - HIGH RISK	239		
5086	FPR - MOBILE ICE CREAM/CANDY	239		
5087	FPR - GROCERY STORE SAMPLING	290		
5088	FPR - CONCESSIONS - LOW RISK	398		
5089	FPR - CONCESSIONS - HIGH RISK	398		
5090	FPR - CATERER	398		
5091	SPPR - CHILDCARE KITCHENS	631		
5092	FPR - ANNUAL ITINERANT - LOW RISK	239		
5093	FPR - ANNUAL ITINERANT - HIGH RISK	300		
5094	FPR - FARMER'S MARKET - SAMPLING	160		
5095	FPR - FARMER'S MARKET - PROCESSED PRODUCT	160		
5096	FPR - FARMER'S MARKET - LOW RISK	160		
5097	FPR - FARMER'S MARKET - HIGH RISK	239		
5098	FPR - SEASONAL PERMIT 0 - 4 MONTHS	239		
5099	FPR - SEASONAL PERMIT NOT TO EXCEED 5 MONTHS	239		
5100	FPR - SEASONAL PERMIT NOT TO EXCEED 6 MONTHS	239		
5101	FPR - SEASONAL PERMIT NOT TO EXCEED 7 MONTHS	239		
5102	FPR - SEASONAL PERMIT NOT TO EXCEED 8 MONTHS	239		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
5103	SPPR - ELEMENTARY SCHOOL KITCHENS	354		
5104	SPPR - MIDDLE SCHOOL KITCHENS	470		
5105	SPPR - HIGH SCHOOL KITCHENS	631		
5106	FPR - MAJ REM PE'S (5001-5018)	319	1.56	
5107	FPR - MAJ REM PE'S (5001-5018) 1 DRIVE UP	358	1.56	
5108	FPR - MAJ REM PE'S (5001-5018) 2 DRIVE UP	397	1.56	
5109	FPR - MAJ REM PE'S (5019-5106) < 1,000 SF	869		
5110	FPR - MAJ REM PE'S (5019-5106) 1,000-2,999 SF	1158		
5111	FPR - MAJ REM PE'S (5019-5106) 3,000-4,999 SF	1449		
5112	FPR - MAJ REM PE'S (5019-5106) 5,000-9,999 SF	1739		
5113	FPR - MAJ REM PE'S (5019-5106) >= 10,000 SF	2029		
5114	FPR - MINOR REMODEL PRG CAT 50	363		
5115	SPPR - INSTITUTIONAL FOOD SERVICE - SMALL	470		
5116	SPPR - INSTITUTIONAL FOOD SERVICE - LARGE	631		
5117	FPR - WATER STORE	398		
5121	FPR - REMOTE SERVICE SITE	398		
5122	FPR - PORTABLE UNIT - TCS	290	94	
5123	FPR - MOBILE PRODUCE	239		
5124	FPR - ANNUAL ITINERANT - LOW RISK - MAJOR	239		
5125	FPR - ANNUAL ITINERANT - HIGH RISK - MAJOR	239		
5200	FPR - BOTTLING PLANT < 1,000 SF	869		
5201	FPR - BOTTLING PLANT 1000 - 2,999 SF	1158		
5202	FPR - BOTTLING PLANT 3,000 - 4,999 SF	1449		
5203	FPR - BOTTLING PLANT 5,000 - 9,999 SF	1739		
5204	FPR - BOTTLING PLANT >= 10,000 SF	2029		
5205	FPR - FOOD PROCESSING < 1,000 SF	869		
5206	FPR - FOOD PROCESSING 1000 - 2,999 SF	1158		
5207	FPR - FOOD PROCESSING 3,000 - 4,999 SF	1449		
5208	FPR - FOOD PROCESSING 5,000 - 9,999 SF	1739		
5209	FPR - FOOD PROCESSING >= 10,000 SF	2029		
5210	FPR - MEAT < 1,000 SF	869		
5211	FPR - MEAT 1000 - 2,999 SF	1158		
5212	FPR - MEAT 3,000 - 4,999 SF	1449		
5213	FPR - MEAT 5,000 - 9,999 SF	1739		
5214	FPR - MEAT >= 10,000 SF	2029		
5215	FPR - BAKERY < 1,000 SF	869		
5216	FPR - BAKERY 1000 - 2,999 SF	1158		
5217	FPR - BAKERY 3,000 - 4,999 SF	1449		
5218	FPR - BAKERY 5,000 - 9,999 SF	1739		
5219	FPR - BAKERY >= 10,000 SF	2029		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
5220	FPR - ICE PLANT < 1,000 SF	869		
5221	FPR - ICE PLANT 1000 - 2,999 SF	1158		
5222	FPR - ICE PLANT 3,000 - 4,999 SF	1449		
5223	FPR - ICE PLANT 5,000 - 9,999 SF	1739		
5224	FPR - ICE PLANT >= 10,000 SF	2029		
5225	FPR - CANDY PROCESSOR < 1,000 SF	869		
5226	FPR - CANDY PROCESSOR 1000 - 2,999 SF	1158		
5227	FPR - CANDY PROCESSOR 3,000 - 4,999 SF	1449		
5228	FPR - CANDY PROCESSOR 5,000 - 9,999 SF	1739		
5229	FPR - CANDY PROCESSOR >= 10,000 SF	2029		
5230	FPR - ICE CREAM PROCESSOR < 1,000 SF	869		
5231	FPR - ICE CREAM PROCESSOR 1000 - 2,999 SF	1158		
5232	FPR - ICE CREAM PROCESSOR 3,000 - 4,999 SF	1449		
5233	FPR - ICE CREAM PROCESSOR 5,000 - 9,999 SF	1739		
5234	FPR - ICE CREAM PROCESSOR >= 10,000 SF	2029		
5235	FPR - GAME PROCESSOR < 1,000 SF	869		
5236	FPR - GAME PROCESSOR 1000 - 2,999 SF	1158		
5237	FPR - GAME PROCESSOR 3,000 - 4,999 SF	1449		
5238	FPR - GAME PROCESSOR 5,000 - 9,999 SF	1739		
5239	FPR - GAME PROCESSOR >= 10,000 SF	2029		
5240	FPR - FEDERALLY INSPECTED MEAT < 1,000 SF	869		
5241	FPR - FEDERALLY INSPECTED MEAT 1000-2,999 SF	1158		
5242	FPR - FEDERALLY INSPECTED MEAT 3000-4,999 SF	1449		
5243	FPR - FEDERALLY INSPECTED MEAT 5000-9,999 SF	1739		
5244	FPR - FEDERALLY INSPECTED MEAT >= 10,000 SF	2029		
5245	FPR - DELI/COMMISSARY PROCESS < 1,000 SF	869		
5246	FPR - DELI/COMMISSARY PROCESS 1000-2,999 SF	1158		
5247	FPR - DELI/COMMISSARY PROCESS 3000-4,999 SF	1449		
5248	FPR - DELI/COMMISSARY PROCESS 5000-9,999 SF	1739		
5249	FPR - DELI/COMMISSARY PROCESS >= 10,000 SF	2029		
5250	FPR - MAJOR REM PRG CAT 52 < 1,000 SF	869		
5251	FPR - MAJOR REM PRG CAT 52 1000-2,999 SF	1158		
5252	FPR - MAJOR REM PRG CAT 52 3000-4,999 SF	1449		
5253	FPR - MAJOR REM PRG CAT 52 5000-9,999 SF	1739		
5254	FPR - MAJOR REM PRG CAT 52 >= 10,000 SF	2029		
5255	FPR - MINOR REMODEL PRG CAT 52	363		
5256	FPR - POULTRY PROCESSOR < 1,000 SF	869		
5257	FPR - POULTRY PROCESSOR 1000 - 2,999 SF	1158		
5258	FPR - POULTRY PROCESSOR 3,000 - 4,999 SF	1449		
5259	FPR - POULTRY PROCESSOR 5,000 - 9,999 SF	1739		

Southern Nevada Health District

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
5260	FPR - POULTRY PROCESSOR = 10,000	2029		
5300	FPR - MARKET < 1,000 SF	869		
5301	FPR - MARKET 1000 - 2,999 SF	1158		
5302	FPR - MARKET 3,000 - 4,999 SF	1449		
5303	FPR - MARKET 5,000 - 9,999 SF	1739		
5304	FPR - MARKET >= 10,000 SF	2029		
5305	FPR - REFRIGERATED STORAGE < 1,000 SF	869		
5306	FPR - REFRIGERATED STORAGE 1000 - 2,999 SF	1158		
5307	FPR - REFRIGERATED STORAGE 3,000 - 4,999 SF	1449		
5308	FPR - REFRIGERATED STORAGE 5,000 - 9,999 SF	1739		
5309	FPR - REFRIGERATED STORAGE >= 10,000 SF	2029		
5310	FPR - PACKAGED STORAGE < 1,000 SF	869		
5311	FPR - PACKAGED STORAGE 1000 - 2,999 SF	1158		
5312	FPR - PACKAGED STORAGE 3,000 - 4,999 SF	1449		
5313	FPR - PACKAGED STORAGE 5,000 - 9,999 SF	1739		
5314	FPR - PACKAGED STORAGE >= 10,000 SF	2029		
5315	FPR - HEALTH FOOD < 1,000 SF	869		
5316	FPR - HEALTH FOOD 1000 - 2,999 SF	1158		
5317	FPR - HEALTH FOOD 3,000 - 4,999 SF	1449		
5318	FPR - HEALTH FOOD 5,000 - 9,999 SF	1739		
5319	FPR - HEALTH FOOD >= 10,000 SF	2029		
5320	FPR - COMMISSARY < 1,000 SF	869		
5321	FPR - COMMISSARY 1000 - 2,999 SF	1158		
5322	FPR - COMMISSARY 3,000 - 4,999 SF	1449		
5323	FPR - COMMISSARY 5,000 - 9,999 SF	1739		
5324	FPR - COMMISSARY >= 10,000 SF	2029		
5325	FPR - DISCOUNT STORE < 1,000 SF	869		
5326	FPR - DISCOUNT STORE 1000 - 2,999 SF	1158		
5327	FPR - DISCOUNT STORE 3,000 - 4,999 SF	1449		
5328	FPR - DISCOUNT STORE 5,000 - 9,999 SF	1739		
5329	FPR - DISCOUNT STORE >= 10,000 SF	2029		
5330	FPR - DRY STORAGE / WAREHOUSE < 1,000 SF	869		
5331	FPR - DRY STORAGE / WAREHOUSE 1000-2,999 SF	1158		
5332	FPR - DRY STORAGE / WAREHOUSE 3000-4,999 SF	1449		
5333	FPR - DRY STORAGE / WAREHOUSE 5000-9,999 SF	1739		
5334	FPR - DRY STORAGE / WAREHOUSE >= 10,000 SF	2029		
5335	FPR - VENDING MACHINE COMPANY < 1,000 SF	869		
5336	FPR - VENDING MACHINE COMPANY 1000-2,999 SF	1158		
5337	FPR - VENDING MACHINE COMPANY 3000-4,999 SF	1449		
5338	FPR - VENDING MACHINE COMPANY 5000-9,999 SF	1739		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
5339	FPR - VENDING MACHINE COMPANY >= 10,000 SF	2029		
5340	FPR - VENDING MACHINE	0	75	
5341	FPR - MAJOR REM PRG CAT 53 < 1,000 SF	869		
5342	FPR - MAJOR REM PRG CAT 53 1000 - 2,999 SF	1158		
5343	FPR - MAJOR REM PRG CAT 53 3,000 - 4,999 SF	1449		
5344	FPR - MAJOR REM PRG CAT 53 5,000 - 9,999 SF	1739		
5345	FPR - MAJOR REM PRG CAT 53 >= 10,000 SF	2029		
5346	FPR - MINOR REMODEL PRG CAT 53	363		
5347	FPR - RETAIL FOOD SALES < 25% OR < 500 SQFT	160		
5400	FPR - FARMER'S MARKET EVENT COORDINATOR	239		
5401	FPR - SWAP MEET	160		
5402	FPR - FOOD COURT	160		
5500	FPR - ANNUAL EVENT COORDINATOR (BASE + 1 HR)	236	118	
5901	FPR - FAILED FPR FIELD VISIT WITH CLOSE	716		
SCHOOLS/INSTITUTIONS				
8200	SPPR - SUMMER CAMP/CHILDREN HOME/INSTITUTION	25		
8201	SPPR - JUVENILE / PENAL INSTITUTIONS < 50	391		
8202	SPPR - JUVENILE / PENAL INSTITUTIONS 50-250	551		
8203	SPPR - JUVENILE / PENAL INSTITUTIONS > 250	710		
8204	SPPR - ELEMENTARY SCHOOL	354		
8205	SPPR - MIDDLE SCHOOL	470		
8206	SPPR - HIGH SCHOOL	631		
8208	SPPR - MINOR REM PRG CAT 82	136		
8209	SPPR - MAJOR REM PRG CAT 82	363		
8210	SPPR - COO PRG CAT 82	337		
CHILDCARE				
8302	SPPR - CHILDCARE FACILITY < 1,000 SF	631		
8303	SPPR - CHILDCARE FACILITY 1000 - 2,999 SF	869		
8304	SPPR - CHILDCARE FACILITY 3,000 - 4,999 SF	949		
8305	SPPR - CHILDCARE FACILITY 5,000 - 9,999 SF	1109		
8306	SPPR - CHILDCARE FACILITY >= 10,000 SF	1500		
8307	SPPR - MINOR REM PRG CAT 83	196		
8308	SPPR - MAJOR REM PRG CAT 83	363		
8309	SPPR - COO PRG CAT 83	337		
MISCELLANEOUS FEES				
8900	MISCPR - NONSTANDARD / ADVISORY RESIDENTIAL	160		
8901	MISCPR - PRELIM/ADVIS PR OR INSPCT - PUB REQ	239		
8902	MISCPR - VARIANCE	1181		
8903	MISCPR - VARIANCE WORKSHEET MEETING	160		

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
8904	MISCPR - PLAN REVIEW REINSPECTION FEE	239		
8905	MISCPR - PLAN RESUBMITTAL/REVISION FEE	239		
8906	MISCPR - COO FACILITY AND EQUIPMENT EVAL	337		
8907	MISCPR - NON-PERMITTED FIELD PR - UPON REQ	239		
8908	MISCPR - OFFICE ADVISORY PR/FSAM - PUBLIC REQ	196		
8909	MISCPR - SPECIAL CIRCUMSTANCE	118		
8910	MISCPR - EXEMPTION	50		
8911	MISCPR - AFT HRS INSPCT 3 HRS INC,THEN HOURLY	551	239	
8912	MISCPR - HACCP PLAN REVIEW	189	50	
8913	MISCPR - HACCP PLAN RESUBMITTAL	0	118	
8914	MISCPR - HACCP PLAN REVIEW OFC/FIELD ADVIS	196		
8915	MISCPR - HACCP PLAN REVIEW - ADDITIONAL HOURS	0	118	
8916	MISCPR - WAIVER	118		
8917	MISCPR - WAIVER - ADDITIONAL HOURS	0	118	
8918	MISCPR - OP PROCEDURE REV (1 HR INC) + # FAC	108	10	
8919	MISCPR - OP PROCEDURE REV - ADDITIONAL HOURS	118		
8920	MISCPR - LABEL REVIEW (plus hourly)	64	118	
8921	MISCPR - FARM-TO-FORK EVENT REGISTRATION	100		
8922	MISCPR - COTTAGE FOOD OPERATION REGISTRATION	160		
8924	MISCPR - COSMETICS MANUF LICENSE	196		
8925	MISCPR - DRUG MANUF LICENSE	196		
8927	FPR - COO FACILITY AND EQUIPMENT EVAL	337		
8928	PPR - COO FACILITY AND EQUIPMENT EVAL	337		
8929	MISCPR - MEDICAL DEVICE MANUFACTURING	196		
8930	MISCPR - CERTIFIED FOOD SAFETY PRG REVIEW	100		
8931	EVENT EXEMPTION	0	100	
8932	MISCPR - EXPEDITED PR INSPECTION - FOOD	200% Plan Fee		
8933	MISCPR - SECONDARY PERMIT	239		
8934	MISCPR - EXPEDITED PR INSPECTION - SCHOOLS	200% Plan Fee		
8935	MISCPR - EXPEDITED PR INSPECTION - SOLID WASTE	200% Plan Fee		
8936	MISCPR - EXPEDITED PR INSPECTION - POOLS	200% Plan Fee		
8937	MISCPR - EXPEDITED PR INSPECTION - PUBLIC ACCOM	200% Plan Fee		
8938	MISCPR - EXPEDITED PR INSPECTION - BODY ART	200% Plan Fee		
8939	MISCPR - EXPEDITED PR INSPECTION - CHILDCARE	200% Plan Fee		
9001	TIME-BASED	0	29.5	
9005	PRINTING / COPY	0	1	
9006	VERIFIED COMPLAINT	118		
9007	REPRINT PERMIT	25		
9008	MISSED APPOINTMENT	239		
9009	CONDUCT TRAINING (2 HOUR MIN) PLUS ADD'L HRS	239	118	

ENVIRONMENTAL HEALTH FEE SCHEDULE

Effective February 1, 2020

PE	DESCRIPTION	FIXED FEE	UNIT RATE	MAXIMUM BILLABLE
9010	INACTIVE STATUS PERMIT FEE	94		
9015	BANK RETURNED CHECK FEE (DEBIT)	25		

SNHD EHD Food Operations Program – Grant Projects

NACCHO MENTORSHIP PROGRAM COHORT 4 (2015)

Project: Ensuring a self-assessment of all nine Program Standards was the responsibility of the Project Coordinator. She scheduled monthly meetings with all Project Leads and Project Members to track progress and to provide assistance. Prior to embarking on each standard, she met with the Project Lead to review the requirements and documentation required of their assigned Standard. The self-assessment of each standard took place per the timeline with the included milestones:
Project Leads:

- Mark Bergtholdt, REHS, MPH, EH Supervisor of Special Programs Office, Program Standard 5 Lead
- Carol Culbert, REHS, EH Supervisor of Spring Valley Office, Program Standard 1 Lead
- Rose Henderson, REHS, EH Manager of Food Operations, Program Standard 9 Lead
- Tamara Giannini, REHS, EH Supervisor of Henderson Office, Program Standard 4 Lead
- Jacquelyn Raiche-Curl, REHS, EH Supervisor of Training and Standardization, Program Standard 2 Lead.
- Larry Rogers, EH Supervisor of East Las Vegas Office, Program Standard 6 Lead.
- Herb Sequera, REHS, EH Supervisor of North Las Vegas Office, Program Standard 8 Lead
- Christine Sylvis, EH Supervisor of Training and Compliance, Program Standard 3 Lead
- Robert Urzi, REHS, EH Supervisor of Resort Corridor Office, Program Standard 7 Lead

Amount: $10,000
Participated as mentee, assigned to Fairfax County, VA as mentor.

AFDO 2015 RETAIL PROGRAM STANDARDS GRANT CATEGORY 3 (TRAINING)

Grant Timeframe: February 2015
Amount: $3,000
Project: One staff member attended Better Process Control School, UC Davis
Training Description: Better Process Control Schools (BPCS) educate and certify in thermal processing systems, acidification, and container closure evaluation programs for low-acid and acidified canned foods. BPCS were established and approved by the FDA. The cost includes instruction, materials and exam. Successful participants are awarded certificates, providing respected credentials to processing professionals. The BPCS course has been highly recommended from colleagues from other jurisdictions at NEHA AEC and FDA Pacific Region Conferences.
Attendees: Nikki Burns Savage

AFDO 2015 RETAIL PROGRAM STANDARDS GRANT CATEGORY 1 (SMALL PROJECT)

Project: SNHD Program Standards Self-Assessment – grant awarded but declined due to award of FDA Cooperative agreement

FDA COOPERATIVE AGREEMENT YEAR 1 JULY 2015 – JUNE 2016

New Food Regulations (Lead: Jacquelyn Raiche-Curl)
Planned to develop a final draft of the 2016 Food Regulations, hold public workshops, develop comparison documents between the 2010 and 2016 regulations, adopt the 2016 regulations with the approval of SNHD's Board of Health, provide training to both industry and inspection staff, and update Food Establishment Resource Library documents.

Violation Documentation Training (Lead: Christine Sylvis)
The EH Training Office will develop and deliver training to Food Operation inspectors to ensure accuracy and consistency when documenting violations and corrective actions on inspection reports.

Food Establishment Inspection Form Update (Lead: Christine Sylvis)
(January 2016-March 2016) Resulting from the adoption of the new Regulations, the Food Establishment Inspection Form would be evaluated and updated. A redesign of the existing form is planned, including creation of new violation categories that will align with the risk factors for foodborne illness. The form will be modified to a 100-(demerit) point format.

Violation Standards Document Enhancement (Lead: Christine Sylvis)
The Violation Standards Document (VSD) is a marking guide which provides a standardized format, describing out of compliance issues for each numerical/categorical violation on the Food Establishment Inspection form. The VSD will be enhanced with new information, including options for immediate, on-site corrective actions related directly to each out-of-compliance risk factor violation, an outline indicating when follow up is required and what action(s) should be taken, and corrective actions for each violation that will lead to long-term resolution of a risk factor. Once the VSD document is updated, inspectors will be trained to the criteria as outlined in the document.

Risk Factor Study (Lead: David Greer)
(September 2015-July 2016) A Risk Factor Study (RF Study) was carried out utilizing models and forms provided the FDA guidance document entitled, Developing a Baseline on the Occurrence of Foodborne Illness Risk Factors-Data Collection Instruction Manual. The study utilized the Decade Envision Connect inspection software to collect data and report results through the statistical occurrences. The data was collected by a team of five EHS IIs. The data were gathered, the EH Manager analyzed them to determine a baseline occurrence of each risk factor.

Standardization (Lead: Jacquelyn Raiche-Curl)
(September 2015-July 2016) Standardized 10 SNHD Standards and 20 EHS II staff standardized in accordance with the FDA model.

Documentation of Training Process (Brisa Soto)
(January 2016-May 2016) Developed a written policy outlining the training process for new hires based on the CFP Field Training Manual and incorporate more of the tools provided in the manual.

Program Development – Mobile Training Kits
Mobile training kits which allowed for a more professional atmosphere conducive to training were purchased to accommodate the large amount of industry training anticipated.

Program Development – FDA Pacific Region Conference
Ms. Sylvis and Ms. Raiche-Curl attended the FDA Pacific Region Retail Food Seminar as prescribed by the FDA Standardization certification maintenance requirements. September 22-24, 2015 in Helena, MT.

Program Development – Program Standards Strategic Planning Workshop
Three staff attended the FDA VNRFRPS Strategic Planning Workshop for the State of Nevada. November 18-19, 2016 in Reno, NV. During the workshop, all jurisdictions agreed to be involved in quarterly conference calls to discuss each jurisdictions status and progress with working through the Standards. (Ms. Reszetar, Ms. Sylvis, and Ms. Baldwin attended)

Program Development – Program Standards Self Assessment and Verification Audit Workshop
Three staff attended the FDA VNRFRPS Self Assessment and Verification Audit Workshop. January 19-521, 2016 in Phoenix, AZ. (Mr. Del Cotto, Ms. Burns Savage, and Mr. Rogers attended)

NACCHO MENTORSHIP PROGRAM COHORT 5 (2016)

Project: Mentor two local health departments.
Mentorship: Assigned to mentor Ogle County, IL complete a self-assessment. Also assigned to mentor Tippecanoe County, IA Health Department, but they opted to drop out of the Mentorship Program.
Amount: $14,000
Participants: Nikki Burns Savage (Project Coordinator), Christine Sylvis, Aaron DelCotto

AFDO 2016 RETAIL PROGRAM STANDARDS GRANT CATEGORY 1 (SMALL PROJECT)

Grant Timeframe: December 2015 – September 2016
Amount: $3,000
Project: Create food safety educational workbooks and pocket guides in English and Spanish. Research, development, template creation, and printing of educational materials. The budget is for the associated printing costs (personnel time covered by SNHD).
Project Lead: Brisa Soto

AFDO 2016 RETAIL PROGRAM STANDARDS GRANT CATEGORY 2 (LARGE PROJECT)

Grant Timeframe: December 2015 – September 2016
Amount: $20,000
Project: The SNHD EH Division facilitated collaborative meetings with Maricopa County Environmental Services Department (MCESD) and San Bernardino County (SBC) Department of Public Health, Division of Environmental Health Services (DEHS). Three meetings held, one in each jurisdiction. The host of the meeting provided the meeting location and helped with transportation of attendees. The non-host LHDs each sent three representatives.
Project Lead: Christine Sylvis

AFDO 2016 RETAIL PROGRAM STANDARDS GRANT CATEGORY 3 (TRAINING)

Grant Timeframe: January – April 2016
Amount: $3,000
Project: Two staff members attended the 2016 Conference for Food Protection
Attendees: Christine Sylvis and Brisa Soto

FDA COOPERATIVE AGREEMENT YEAR 2 JULY 2016 – JUNE 2017

QA Program, Standard 4 (Lead: Tamara Giannini)
To follow up on progress made on Standard 3 in year one, a written quality assurance (QA) program document was developed. EH Supervisor Tamara Giannini served as Project Lead to develop written policies that incorporated the ten quality assurance program elements detailed in Standard 4 with a team of EH staff. Review of inspection reports as well as joint inspections with a QA team were developed into the policy to ensure the proper application of the Regulations and EH policies.

Self-Assessment & Verification Audit of Standard 1 (Lead: Christine Sylvis)
In order to assess the efficacy of the implementation of the new Regulations, a full self-assessment of Standard 1 will be one of the major projects for Year 2. This project will be led by Jacquelyn Raiche-Curl, EH Supervisor, with the side-by-side comparison completed by Christy Munaretto, EHS II, who worked on the comparison for the recently completed self-assessment and is part of the Regulation Update Team.

The self-assessment is expected to bring the SNHD into compliance with Standard 1. If this is achieved, a verification audit of the self-assessment results will be scheduled by Ms. Sylvis with a qualified auditor.

Due to the extent of the documentation, it is planned to have the verification audit performed at the SNHD.

Waiver Policy, Standard 3 (Lead: Nikki Burns Savage)
A written policy which addresses the submission and review of waivers (equivalent to the FDA's Model Food Code variance) was created. The policy includes circumstances requiring a waiver, the required documentation needed for submission, how the submitted documentation is evaluated by staff, methods for requesting additional information and/or corrections, stipulations following issuance of an approved waiver, and provisions for waiver revocation should the operator not conform to the approved process(es). The Waiver Policy was written by the Special Processes Team Lead, Nikki Burns-Savage, Senior EHS and Tara Edwards, EHS II, under the supervision of Christine Sylvis, EH Supervisor.

HACCP Plan Policy, Standard 3 (Lead: Nikki Burns Savage)
A written policy which addresses submission and review of HACCP plans was created. The policy includes required documentation for submission, methods for evaluation of the plan, requests for additional information and/or corrections to submitted documentation, field evaluation/inspection and assessment of the plan, administrative requirements for updating plans, and provisions for revocation should the operator not conform to the approved process(es). The HACCP Policy was written by the Special Processes Team Lead, Nikki Burns-Savage, Senior EHS and Tara Edwards, EHS II, under the supervision of Christine Sylvis, EH Supervisor.

Food Safety Information Cards, Standard 9 (Lead: Candice Simms)
A targeted intervention strategy that the SNHD would like to institute is to provide facility operators and food handlers with food safety information cards, about the size of a business card or badge. Candice Simms, Senior EHS was Project Lead with a team of EH staff along with design, formatting, and technical assistance from SNHD Information Technologies (IT) and SNHD Public Information Office (PIO).
They designed cards which contain key food safety information points, concentrating on foodborne illness risk factors and will look into translation into other languages. The SNHD Food Handler Card Program has donated a color card printer currently used to print SNHD-issued food handler cards to EH.

Risk Factor Study - Schools, Standard 9 (Lead: David Greer)
With the Risk Factor Study complete on restaurants in year one, David Greer, EHS, will continue to serve as Project Lead for the Risk Factor Study on schools in year 2. He will oversee the planning, random selection of facilities, data collection, data analysis, and final report. The SNHD has approximately 400 permitted school kitchens.

Standardization, Standard 2 (Lead: Jacquelyn Raiche-Curl)
Standardization of staff will continue overseen by Project Lead Jacquelyn Raiche-Curl. The final three SNHD Standards and approximately 40 EH Staff were standardized. This was accomplished by conducting pre-standardization training and standardization inspections with a group of up to 13 EH staff each 3-month period.

Continuing Education Tracking, Standard 2 (Lead: Christine Sylvis)
In order to align with the continuing education requirement in Standard 2, Ms. Sylvis and Ms. Burns-Savage developed an EHS training documentation system to track food safety training for approximately 70 EH staff.

NACCHO MENTORSHIP PROGRAM COHORT 6 (2017)

Project: Mentor two local health departments.
Mentorship: Assigned to mentor First District Health Unit, ND complete a self-assessment; Washoe County, NV Health Department with Standard 4.
Amount: $11,000
Participants: Project Coordinator - Christine Sylvis. Team Leads - Nikki Burns-Savage and Christine Sylvis. Team Members will be Tanja Baldwin, Alexis Barajas, Aaron DelCotto, and Larry Navarrete.

AFDO 2017 RETAIL PROGRAM STANDARDS GRANT CATEGORY 1 (SMALL PROJECT)

Project Title: Targeted food safety social media outreach in Southern Nevada
Grant Timeframe: January – November 2017
Amount: $3,000 (Budget used to attend the 2017 National Consumer Food Safety Education Conference. Attendees: Jason Banales, Heather MacDavid)
Project: The objective of our project is to create a social media presence for the Southern Nevada Health District (SNHD) Food Operations to engage the community towards food safety in innovative ways. Our goal is to use social media to facilitate a food safety culture in our community of food handlers. The accounts would be used to post food safety information including tips, reminders, and current SNHD campaigns. Inspectors can submit pictures and videos that highlight examples of food safety. Our team also collaborated with SNHD PIO to discuss any potential legal issues and strategies to increase online traffic.
Project Lead: Jason Banales

AFDO 2017 RETAIL PROGRAM STANDARDS GRANT CATEGORY 3 (TRAINING)

Project Title: Training for Industry Representatives and Regulatory Food Inspection Staff on the Implementation and Verification of Effective Employee Health Programs
Grant Timeframe: September – November 2017
Amount: $3,000 (Budget used to pay Janet Anderberg to conduct the training)
Project: The training emphasized the importance of having more than a written plan that employees sign when they are hired for an effective employee health policy. An effective employee health policy should include a variety of training methods and activities. Particularly important is having a policy that includes interviewing employees when they are ill. The training demonstrated specific techniques for both inspectors and food establishment operators on how to properly interview employees in order to gain the necessary information to determine when food handling activities should be restricted. Challenges faced by the food industry and potential solutions were discussed. The training included real world examples of outbreaks caused by employees who were not properly excluded or restricted from food handling activities. Emphasis was placed on the importance of making sure when interviewing employees that there is a clear understanding when discussing foodborne illness symptoms.
Project Lead: Jacque Raiche-Curl

AFDO 2017 RETAIL PROGRAM STANDARDS GRANT CATEGORY 4 (TASK FORCE)

Project Title: SNHD Attendance at 2017 NFSTF/NVEHA Conference
Grant Timeframe: February – May 2017
Amount: $2,820
Project: Being awarded this grant allowed the SNHD Food Operations Program to send four Environmental Health Specialists (EHSs) to attend and participate in the Nevada Food Safety Task Force (NFSTF) & Nevada Environmental Health Association (NEHA) Annual Joint Education Conference 2017, scheduled for April 2017 in Reno, NV.
Project Coordinator: Christine Sylvis

Attendees: Carol (More) Culbert, EH Supervisor; Chrissy Lin, Environmental Health Specialist (EHS) II; Virginia Whitesides, EHS II; Victoria Wilson, EHS II

FDA COOPERATIVE AGREEMENT YEAR 3 JULY 2017 – JUNE 2018

Integrating Video Training, Standard 4 (Lead: Valerie Cohen**)**
A strategy to integrate training videos into routine standard inspections was developed. Valerie Cohen, EHS II, served as Project Lead and worked with a team (including Christine Sylvis, EH Supervisor) to research, review, and identify appropriate food safety training videos. The team developed a standardized approach to incorporate the training videos into routine inspections.

Standardization, Standard 2 (Lead: Jacquelyn Raiche-Curl)
Standardization of staff continued to be overseen by Project Lead Jacquelyn Raiche-Curl. The remaining five EHSs and 14 new staff that met qualifications this budget period based on hire date were standardized. This was accomplished by conducting pre-standardization training and standardization inspections.

Foodborne Illness and Food Defense Preparedness and Response, Standard 5 (Lead: Susan Lane)
The self assessment of Standard 5 conducted March 12, 2015 measured at 41% met per the Self Assessment/Audit Verification Summary and Gap Analysis. Susan Lane, EHS II, served as Project Lead and put together a team of Special Programs, Food Operations, and Office of Epidemiology staff. They developed policies and procedures identified as gaps in the self assessment with the goal of meeting Standard 5.

Risk Factor Study – Retail Establishments, Standard 9 (Lead: Tara Edwards)
Tara Edwards, EHS II, served as Project Lead and data collector to complete the risk study factor for retail establishments (grocery stores). She oversaw the planning, random selection of facilities, data collection, data analysis, and the final report. Debbie Clark, EHS II, was a data collector and assisted with the project.

Intervention Training, Standard 1 (Lead: George "Larry" Navarrete)
The SNHD uses an Administrative Process Policy to address compliance and enforcement issues in noncompliant food establishments. Although food safety education is addressed in the first step, it is not the primary focus of the meeting. This project redirected the first meeting to concentrate on food safety to gain long-term corrective action on out of control risk factors through a Training Intervention Meeting. Training Officers Larry Navarrete (Project Lead) and Alexis Barajas developed a training program and amended the current policy to incorporate the new procedure.

Hold Order and Destruction Policy, Standard 1 (Lead: Christine Sylvis)
A gap identified in the side-by-side comparison of the proposed draft Regulations to the 2013 Food Code was the lack of a policy and form to place food on hold and the resulting release or destruction of the food. Christine Sylvis, EH Supervisor, served as Project Lead to develop the written policy regarding orders to hold and potentially destroy adulterated food and food from an unapproved source.

NACCHO MENTORSHIP PROGRAM COHORT 7 (2018)

Project: Mentor three local health departments.
Mentorship: Assigned to mentor First District Health Unit, ND with Standards 3 and 9; Seattle & King County Public Health (WA) with Standards 5 and 7; North Dakota Department of Health Division of Food and Lodging with Standard 4.
Amount: $14,000

Participants: Project Coordinator – Tanja Baldwin. Team Leads - Tanja Baldwin, Alexis Barajas, Nikki Burns-Savage. Team Members – Nancy Chu, Kendra Lett, Larry Navarrete, Rabea Sharif, Christine Sylvis, Brenda Welch

AFDO 2018 RETAIL PROGRAM STANDARDS GRANT CATEGORY 1 (SMALL PROJECT)

Project Title: Non-Traditional Food Service Training and Outreach
Grant Timeframe: January – October 2018
Amount: $3,000 (Budget used to send Mr. Banales, Mr. Billings, and Ms. Knowles, to the 2018 FDA Pacific Region Retail Food Seminar)
Project: The project focused on educational outreach for non-traditional food vendors including farmer's markets, annual itinerants, mobile vendors, and cottage food operators (a rapidly growing and very transient community in Southern Nevada). These vendors face additional challenges in maintaining food safety largely because they do not have a centralized location for processing and selling their food. These vendors also have regulatory restrictions and allowances, of which they are often unaware, for selling their products resulting in noncompliance.
Project Lead: Jason Banales

AFDO 2018 RETAIL PROGRAM STANDARDS GRANT CATEGORY 3 (TRAINING)

Project Title: SNHD Enhanced Communication Training
Grant Timeframe: March – September 2018
Amount: $3,000 (Budget used to pay trainers travel and cost)
Project: The training was self-hosted communication training for regulatory food inspection EHSs. The training focused on ways to improve staff communication, both with colleagues and community/industry members. The training was led by Michéle Samarya-Timm, an expert in the field of Environmental Health based in Somerset County, NJ, with a particular focus on improving staff members' abilities to express themselves while performing routine risk-based inspections. Improvements of staff skills are aimed at increasing long-term compliance by helping operators fully understand the results of their risk-based inspection, as well as aid in achieving on-site corrective actions. The goal of enhanced communication skills for staff supports outreach and relations with other community members that staff interact with on a routine basis, such as executives of large corporations or local politicians.
Project Coordinator: Jason Banales and Christine Sylvis

AFDO 2018 RETAIL PROGRAM STANDARDS GRANT CATEGORY 4 (TASK FORCE)

Project Title: Nevada Food Safety Task Force (NFSTF) & Nevada Environmental Health Association (NvEHA) Annual Joint Education Conference 2018
Grant Timeframe: January – May 2018
Amount: $3,000
Project: The 2018 conference was April 21-22, 2018 at the Palace Station Hotel in Las Vegas with the theme of "Bridging Gaps." Provided 24 scholarships of $125.00 to EHSs within Food Ops, EH Training, Special Programs, and FDAP programs to attend the NFSTF & NvEHA Annual Joint Education Conference 2018.
Project Coordinator: Christine Sylvis

FDA COOPERATIVE AGREEMENT YEAR 4 JULY 2018 – JUNE 2019

Allergen Intervention Strategy, Standard 9 (Lead: Mikki Knowles, EHS II)
The 2016 SNHD Restaurant Risk Factor Study brought to light the need for increased allergen awareness. The statistics gathered found "the person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens" to be "out" at a rate of 70.9 percent.

To address this area of increasing public health concern, the SNHD developed an allergy awareness intervention strategy in accordance with Standard 9. Ms. Knowles put together a team to create education materials and an approach to disseminate information to operators.

Standard 5 Verification Audit (Lead: Christine Sylvis, EH Supervisor)
During the last grant cycle, the SNHD developed and amended policies and procedures identified as gaps in Standard 5 during the 2015 self-assessment. Another self-assessment was conducted and it was determined that the standard was met and was self-reported to the FDA. The SNHD has requested Washoe County (NV) Health District to conduct a verification audit of the standard which they have agreed. The audit took place at the SNHD main office.

Regulation Update, Standard 1 (Lead: Jacque Raiche-Curl, EH Supervisor)
The current *SNHD Regulations Governing the Sanitation of Food Establishments* (Regulations) are based primarily on the 2005 FDA Food Code and were adopted in 2010. A draft to update the Regulations was developed in 2015, but was put on hold by the SNHD Board of Health. The EH Division is ready to continue that work. Ms. Raiche-Curl will put together a team to update the Regulations based on the 2017 FDA Food Code, complete a redline comparison document with regulation updates, and hold public workshops and meetings to gain input from industry. One goal of the Regulation update is to meet the requirements of Standard 1. The team anticipates presenting a final draft to the SNHD Board of Health for adoption.

Standardization, Standard 2 (Lead: Jacque Raiche-Curl, EH Supervisor)
Standardization will continue to maintain food inspection staff at ≥ 90 percent as required by Standard 2. This was accomplished by conducting pre-standardization training and overseeing the standardization process for seventeen staff who will meet qualifications this budget period based on hire date. She also conducted re-standardization inspections with eight SNHD Standards and oversaw the re-standardization of seven EHS II staff during this budget period.

HACCP/Waiver Electronic Submission, Standard 3 (Lead: Nikki Burns Savage, Senior EHS)
Currently, HACCP plans and waivers ("waiver" is the SNHD term for the Food Code term "variance") required to be submitted by SNHD Regulations, are provided on paper and the final approved documents are scanned into the inspection database. The SNHD website contains many forms and documents used to develop HACCP plans and waivers in MS Word and Excel. Ms. Burns Savage led a team to convert the MS documents to fillable PDF documents and allow for electronic submission in line with the SNHD website accessibility plan. This new method will streamline submissions in line with Standard 3 and eliminate paper providing an environmentally friendly process.

FERL Website Update, Standard 7 (Lead: Alexis Barajas)
The Food Establishment Resource Library (FERL) on the SNHD website provides food establishment operators with a multitude of guidance documents including handouts, templates for standard operating procedures, logs, fact sheets, frequently asked questions, and much more. The FERL, established in 2011 with documents added as they were developed, is one of the principal ways the SNHD provides regulatory guidance, education, and support to the regulated community (Standard 7). The original organization and wording has remained the same since its inception. Ms. Barajas put together a team to review the documents posted on the FERL and determine if they are relevant to current practices and policies, remove those that are obsolete, and reorganize the contents with updated language. Also, MS Word and Excel documents were modernized by being converted to fillable PDF documents in accordance with the SNHD website accessibility plan.

Continuing Education, Standard 2 (Lead: Meredith Garman, EHS II)
As required in Standard 2, continuing education is important to enhance inspector's knowledge, skills, and ability to perform retail food establishment inspections. Continuing education in the form of training is conducted during staff meetings. It is a goal of the EH Division this budget period to provide more in-depth training on EH topics as they relate to food establishments during quarterly staff meetings and during a special EH Training Day. To ensure training meets a professional standard, the SNHD submitted required information to the National Environmental Health Association for approval of contact hours. Ms. Garman worked with the EH Quality Circle to determine training topics, organize the training sessions, and apply for the approval of contact hours.

Food Safety Assessment Meeting (FSAM) Video, Standard 7 (Lead: Thomas San Nicolas, EHS II)
The SNHD conducts FSAMs when deemed necessary during the plan review process to assess Person in Charge (PIC) knowledge and control of risk factors. During the FSAM, guidance and education is provided to the PIC in areas that lack knowledge and/or active managerial control A strategy to integrate a video to assess PIC knowledge into the FSAM was developed. Mr. San Nicolas served as Project Lead and worked with a team to research, review, and identify appropriate food safety topics that were highlighted in the video, created video content, filmed the video, and developed a process to integrate it into the FSAM. Resources from the SNHD Public Information Office were utilized in the development, filming, and editing of the video. Not only does the video help assess PIC knowledge, it is a mechanism for educating PICs and emphasize the importance of active managerial control (Standard 7).

Program Development - FDA Pacific Region Retail Food Seminar: As FDA Standards, Ms. Sylvis and Ms. Raiche-Curl attended the FDA Pacific Region Retail Food Seminar as prescribed by the FDA certification maintenance requirements. The seminar was scheduled for September 11-13, 2018 in Boise, ID. There were three additional attendees consisting of staff that has contributed to work on the Program Standards so they could network with other food safety professionals and gain food safety continuing education required by Standard 2.

Program Development - The Consumer Food Safety Education Conference: This food safety education conference, sponsored by the non-profit Partnership for Food Safety Education, explored the way to effect behavior change and how to better engage everyone in modeling proper food preparation and hand hygiene practices as well as allowed for an opportunity to network and engage in collaborative dialogue with health and food safety professionals from many sectors of food safety professionals. The conference was March 7-8, 2019 with pre-conference workshops March 6, 2019 in Orlando, FL and has the theme "From Consumers to Chefs: Food Safety Education Matters."

NACCHO MENTORSHIP PROGRAM COHORT 8 (2019)
Project: Mentor three local health departments.
Mentorship: Assigned to mentor City of Arlington, TX with Standard 3; Randolph County, NC with Standard 9/Risk Factor Study; City of Amarillo, TX with Standards 3 and 4.
Amount: $15,400
Participants: Project Coordinator – Christine Sylvis. Team Leads - Alexis Barajas, Nikki Burns-Savage, and Nancy Chu. Team Members – Belinda Bober, Jacquelyn Raiche-Curl, Jason Banales, Kendra Lett, Larry Navarrete, Mikki Knowles, Raymond Campa, Tanja Baldwin.

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT CATEGORY 1 (SMALL PROJECT)
Project Title: SNHD Food Handler Safety Training Card Video Series
Grant Timeframe: January – June 2019
Amount: $3,000 (Budget used to pay salaries of Mr. Kelton, Mr. Billings, and Ms. Sylvis)

Project: The project focuses on educational outreach for food handlers and the community by providing approximately 22 two-minute food safety training videos. The free videos are available to industry and the community on the SNHD website. This safe food handling training, along with the SNHD self-study workbook currently provided, will prepare active and prospective food handlers to successfully complete the written exam required to obtain the Food Handler Safety Training Card. To accomplish this, we partnered with the University of Nevada Cooperative Extension (UNCE), who wrote scripts based on SNHD-provided content. The SNHD edited the scripts and planned filming, filmed the modules, edited the videos, and posted the videos to SNHD's website. The NFSTF secured the filming location and arrange for props during the planning phase.
Project Lead: Jason Kelton

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT CATEGORY 3 (TRAINING)

Project Title: SNHD Attendance at Special Processes at Retail Course
Grant Timeframe: January – April 2019
Amount: $2,444
Project: The FD312 Special Processes at Retail course prepared participants to inspect retail food establishments that conduct special processes as identified by the FDA Food Code to require a HACCP plan. Participants have a deeper understanding of the potential food safety issues associated with these special processes as the microbiology and the associated hazards were examined. The course included an evaluation of various food samples, verification and validation of HACCP, and approaches to conducting inspections.
Project Coordinator: Christine Sylvis
Attendees: Christine Sylvis, Nikki Burns Savage, and Tara Edwards

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT CATEGORY 4 (TASK FORCE)

Project Title: Attendance at the NFSTF & NvEHA 2019 Joint Annual Educational Conference (AEC)
Grant Timeframe: January – May 2019
Amount: $3,000
Project: The 2019 NFSTF & NvEHA Joint AEC was held in Reno, Nevada at the Grand Sierra Resort from April 23 to 25, 2019.
Project Coordinator: Christine Sylvis
Attendees: Jodi Brounstein, Tom Sheffer, Nancy Hall, Diane Umuhoza, Vanessa Ortiz

FDA COOPERATIVE AGREEMENT YEAR 5 JULY 2019 – JUNE 2020

NVRFRPS Full Self-Assessment (Project Coordinator: Christine Sylvis, EH Supervisor)
Ensuring a self-assessment of all nine Program Standards will be the responsibility of the Project Coordinator. The last full self-assessment was conducted in 2015. Prior to embarking on each standard, Ms. Sylvis will meet with the Team Leads to review the requirements and documentation required of their assigned Standard. Each lead will put together a team to conduct the self-assessment and will meet regularly with the Project Coordinator, who will track progress and provide guidance.
The information from the self-assessment will be used to identify gaps in the food operations program, establish a strategic plan, and set goals that will incorporate continuous quality improvement within the food inspection program.
The Team Leads with timelines are as follows:

- Standard 1: Robert Urzi, EH Supervisor; October 2019-May 2020.
- Standard 2: Jacquelyn Raiche-Curl, EH Supervisor; June 2019-May 2020.
- Standard 3: Co-leads Aaron DelCotto and Carol Culbert, EH Supervisors; November 2019-February 2020.
- Standard 4: Tamara Giannini, EH Supervisor; June 2019-December 2019.

- Standard 5: Christine Sylvis, EH Supervisor; June 2019-December 2019.
- Standard 6; Tanja Baldwin, EH Supervisor; January 2020-April 2020.
- Standard 7: Christine Sylvis, EH Supervisor; June 2019-March 2020.
- Standard 8: Larry Rogers, EH Manager; July 2019-December 2020.
- Standard 9: Christine Sylvis, EH Supervisor; November 2019-May 2020.

Standardization, Standard 2 (Lead: Jacquelyn Raiche-Curl, EH Supervisor)
Ms. Raiche-Curl will maintain standardized food inspection staff at ≥ 90 percent as required by Standard 2. She will conduct pre-standardization training and oversee the standardization process for nine staff who will meet qualifications this budget period based on hire date. She will also conduct re-standardization inspections with six SNHD Standards and oversee re-standardization of eighteen EHS II staff.

Special Process Course, Standards 2 and 3 (Lead: Tara Edwards, EHS II)
Las Vegas, Nevada, which makes up a large portion of Clark County, has been described as a culinary mecca. Consequently, the SNHD food inspectors frequently observe a variety of innovative procedures, including many special processes, when conducting field inspections. However, with special processes being such a complex topic, food inspectors often question whether the process they are observing is safe and whether a HACCP plan would be required. The goal of this project is to provide staff with the necessary knowledge and skills, as required by Standard 2, to adequately assess special processes observed in the field, and to understand the risk and regulatory requirements for the observed process as required for Standard 3. SNHD will submit information to the National Environmental Health Association for approval of contact hours to ensure training meets a professional standard. Ms. Edwards will work with the SNHD Special Process Team to create a training course focused on recognizing special processes and understanding the associated hazards, develop a plan to deliver the course to approximately 80 staff, conduct the training, and apply for the approval of contact hours. Tentative timeline: July 2019-September 2019 to create the training course and materials, develop the training plan, order supplies and September 2019-May 2020 to deliver the course.

Industry Interaction, Standard 7 (Lead: Kristina Moreno, EHS I)
Communicating with industry is vital to developing partnerships and protecting public health. Despite its importance, the SNHD Food Operations does not currently have a formal system of written communication when interacting with industry. The goal of this project is to develop an official method to enhance communication with industry (Standard 7). Ms. Moreno will work with a team to determine with whom, in industry, the SNHD Food Operations should be communicating, the method of communication, and the information that will be communicated.

Food Safety Videos Training Translation (Lead: Christine Sylvis, EH Supervisor)
The SNHD is currently in the process of developing several food safety videos which include an English narrative (FDA/ Association of Food and Drug Officials (AFDO) Small Grant Project). However, Clark County, NV. is a diverse community with a large population who speak languages other than English. Providing adequate food safety education when there is a language barrier is often challenging. To help overcome this challenge, the scripts for the food safety videos will be translated to Spanish and Mandarin, the two languages most in need by the foodservice industry, by an outside company and the updated narrative will be recorded by SNHD employees.

Program Development - FDA Pacific Region Retail Food Seminar: As FDA Standards, Ms. Raiche-Curl attended the FDA Pacific Region Retail Food Seminar as prescribed by the FDA certification maintenance requirements. The seminar was September 10-12, 2019 in Mesa, Arizona. There were three additional

attendees, consisting of Food Operations or Training Office staff who networked with other food safety professionals and gain food safety continuing education required by Standard 2.

Program Development - Western Association of Food and Drug Officials (WAFDO) & FDA Southwest Regional Joint Conference: Attending the WAFDO & FDA Southwest Regional Joint Conference allowed staff to learn about dietary supplement inspections and kratom which is not available at other food safety conferences. Attendees also learned about CBD in food, special processes, foreign supplier verification, and other topics. In addition, WAFDO representatives approached SNHD to encourage their participation in the conference as Nevada has not been represented for a few years. Christine Sylvis, FDA Standard and supervisor over dietary supplements and one other EH staff member attended the conference in Salt Lake City, UT, August 19-21, 2019 (with travel on August 18 and 20, 2019).

Program Development - 2020 Conference for Food Protection (CFP): Three EH staff will attend the 2020 CFP in Denver, Colorado, March 30 - April 3, 2020. Ms. Sylvis and Ms. Culbert have served as members of Council II and III respectively in the past and plan to apply for the 2020 conference. The third attendee will be an EH staff member who is interested in volunteering for committee work and serving on a council in the future. Attending the conference will provide detailed knowledge regarding current food safety information and recommendations from the Councils, allowing SNHD to make sound, evidence-based decisions when interpreting regulations (based on the Food Code) and evaluating variance requests which are in alignment with Standard 1 and 3, respectively.

Program Development - Association of Food and Drug Officials (AFDO) 124th Annual Education Conference (June 2020): Attending the conference scheduled for June 27 - July 1, 2020 in Phoenix, AZ will provide valuable medical and food safety knowledge which will be utilized during inspections of dietary supplement manufacturers and food establishments in alliance with Standard 3. In addition, the two attendees (to be determined), consisting of Food Operations/Training Office staff, will receive food safety continuing education credit as required by Standard 2. Upon their return, the attendees will share knowledge gained with other Food Operations/Training Office staff.

Program Development - FD108, Temporary Food Establishments (TFEs) Course: Knowledge provided by the FD108 course (date and location to be determined) will be utilized when permitting and inspecting a variety of TFEs within Clark County. The SNHD permits approximately 4,300 TFEs per year ranging from small scale, single day events to multi-day events with over 411,000 attendees held at the many convention centers and sports complexes. The two staff members attending the course (to be determined) will gain information concerning how to evaluate applications, conduct menu reviews, mitigate identified hazards, and determine the unique resources and considerations necessary for large scale TFE events. Upon return, the attendees will share knowledge gained with the Food Operations Leadership Team to determine if changes to current practices are needed.

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT FALL SPECIAL FUNDING

Project Title: SNHD Attendance at FD112 November 19-20, 2019
Grant Timeframe: October 1, 2019 to December 31, 2019
Amount: $2,494.00
Project: Attend the FDA Food Code Course (FD112) which is designed to educate participants on the science-based guidance and enforceable provisions for controlling risk factors known to cause foodborne illness.
Training Participants: Jacquelyn Raiche-Curl, Valerie Cohen

AFDO 2020 RETAIL PROGRAM STANDARDS GRANT CATEGORY 1 (SMALL PROJECT)

Project Title: SNHD Food Safety Training for Childcare Facilities
Grant Timeframe: January 2020 to August 2020
Amount: $3,000
Project: This project will be an intervention strategy focused on the deficiencies found during the school Risk Factor Study conducted in 2016-2017. Instructional classroom training with hands-on demonstrations will be created focused on childcare facilities with food service due to the population being highly susceptible. The objective of the project is to increase childcare food worker knowledge in handwashing (how and when), TCS temperature control, and cleaning and sanitizing of food contact surfaces. The training will target oral culture learners so the information will be formatted in a usable, easy to decipher way.
Project Lead: Meredith Garman

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT CATEGORY 2 (MODERATE PROJECT)

Project Title: SNHD Foodborne Illness Self-Reporting Campaign
Grant Timeframe: January 2020 to October 2020
Amount: $18,862
Project: The objective of this project is to increase public awareness of the methods for self-reporting foodborne illness (FBI) complaints to the Southern Nevada Health District (SNHD). In 2018, only 35% of FBI complaints received by SNHD were reported by the ill person. Most complaints were received from medical facilities (57%) with a small percentage coming from other regulatory jurisdictions (7%). The time from exposure to reporting was drastically increased when the FBI complaints came from a source other than the ill person (~24 days vs ~5 days). Increasing self-reporting of FBI, and consequently decreasing the time between exposure and investigation, will strengthen the SNHD's Foodborne Illness and Food Defense Preparedness and Response (Standard 5).

SNHD will develop an FBI reporting slogan that will be promoted via targeted advertisement on social media platforms from January 1 to July 31, 2020. SNHD staff will also attend four community events from January 1 to July 31, 2020 to educate the public (Standard 7). Printed material including the FBI risk factor prevention and the developed slogan, and promotional items with FBI reporting information will be distributed. Grant funds will be utilized to cover fees for the social media advertisement and event registration and the costs for printed materials and promotional items. Data will be analyzed to determine the effectiveness of the campaign from July 31 to October 29, 2020.
Project Lead: Tara Edwards

AFDO 2020 RETAIL PROGRAM STANDARDS GRANT CATEGORY 3 (TRAINING)

Project Title: SNHD Verbal Judo Institute Communication Training for Food Program Staff
Grant Timeframe: January 2020 to September 2020
Amount: $3,000
Project: Regulatory staff practicing the art of de-escalation, otherwise known as "Verbal Judo," during inspections is very important. Receiving training in this area will improve this skill for inspectors and would ensure more effective overall communication during inspections and investigations. Calm communication facilitates more accurate reports and the likelihood that food establishment operators will understand food safety issues and comply with directions for corrective actions. This training would assist in compliance with Standards 2 and 4, as calm discussions of the issues related to food safety improve all aspects of the food program at SNHD. Inspectors are more successful when they are more knowledgeable in how humans communicate, stay calm during conflict, deflect verbal abuse, and offer empathy and working solutions to operators.
Project Lead: Christine Sylvis

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT CATEGORY 4 (TASK FORCE)

Project Title: SNHD attendance at the NFSTF and NvEHA 2020 Joint AEC
Grant Timeframe: January 2020 to May 2020
Amount: $3,000
Project: The 2020 AEC will be held in southern Nevada on April 28-29, 2020 at the Sahara Las Vegas.
Project Coordinator: Christine Sylvis

AFDO 2019 RETAIL PROGRAM STANDARDS GRANT CATEGORY 4 (TASK FORCE) PENDING

Project Title: Southern Nevada Health District (SNHD) Attendance at 2020 CFP
Grant Timeframe:
Amount: $2,400
Project: Three staff members to attend the 2020 Conference for Food Protection Meeting
Project Lead: Christine Sylvis

CDC 2015-2020 ENVIRONMENTAL HEALTH SPECIALISTS NETWORK (EHS-Net)

Project Title: CDC 2015-2020 Environmental Health Specialists Network (EHS-Net)
Grant Timeframe: September 30, 2015 to September 29, 2020
Amount: $962,500
Project: Over the course of the 5-year project period, SNHD investigated the effects of utilizing novel technologies to improve food safety and foodborne illness response. Additionally, SNHD worked to improve foodborne illness investigations by incorporating environmental assessments and working to identify and report contributing factors and environmental antecedents.
Project Coordinator: Lauren DiPrete

Special Events and Public Mass Gatherings in Southern Nevada

Las Vegas is home to a variety of special events. On any given year, SNHD regulates thousands of special events. Large events such as the Electric Daisy Carnival (EDC), San Gennaro Italian festival, Life is Beautiful music festival, and NASCAR require extensive planning and coordination to protect and promote the well-being of the residents and visitors of Southern Nevada.

EDC is the largest electronic music festival in North America. The annual flagship event takes place at the Las Vegas Motor Speedway (LVMS) every May in North Las Vegas, Nevada. The magnitude of the event cannot be understated- the event draws in over 450,000 people over the course of 4 days and is considered Southern Nevada's only Public Mass Gathering. The venue provides 8 music stages, 18 carnival rides, 4 Ferris wheels, and employs 5000 staff members and 500 police officers. In 2018, EDC opened a separate camping site as a pre-opening experience to the main event. **In 2019, there were approximately 25,000 campers. In 2019, over 200 food inspections were conducted during the festival.**

NASCAR is an event that occurs twice annually at the Las Vegas Motor Speedway. Each event lasts three days, one in the fall and one in the spring. In 2019, inspections were conducted on over 180 food establishments during each of the events. This large event poses unique challenges to inspectors which require thorough planning and coordination.

Challenges for these types of events are typically associated with its size. EDC takes place at night from 8 pm to 6 am with varying start times. Challenges range from inspections taking place in the dark over a large area with little access to telecommunications. Additionally, vendors come from all over the world and have different food safety standards, serve a wide variety of cuisines and sometimes have food from unapproved sources. Moreover, the transportation and storage of food has presented issues in the past. With little infrastructure and a lot of security at the Motor Speedway, vendors often transport food and sit for hours trying to get into the venue causing their food to be out of temperature. While there are support refrigerators on site, they are in one area which may be up to a mile from the food booth. Transportation and storage present the greatest issue for safe food temperatures. Finally, the LVMS is a large piece of expansive land in the desert with little barrier to natural contamination. In 2019, the first two days of EDC experience large dust storms and food was found contaminated and not able to be sold to the public.

The 2016 SNHD Restaurant Risk Factor Study brought to light the need for increased allergy awareness. The statistics gathered found that "the person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens" to be "OUT" at a rate of 70.9 percent.

2016 RISK FACTOR STUDY RESULTS

Combined					
Number of Information Statements	**IN**	**IN %**	**OUT**	**OUT %**	**TOTAL OBSERVATIONS (IN and OUT)**
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens.	39	29.1	95	70.9	**134**
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	86	64.2	48	35.8	**134**

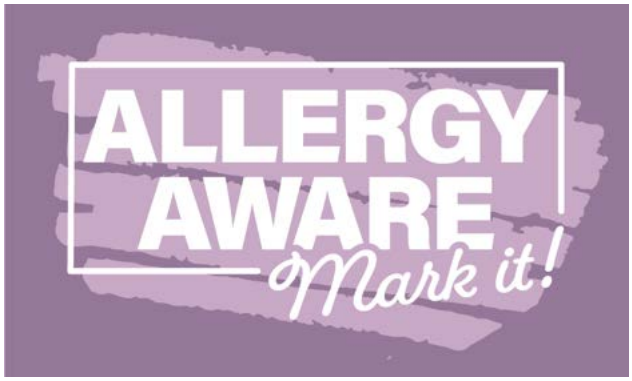
To address this area of increasing public health concern, the SNHD developed an allergy awareness intervention strategy in accordance with Standard 9 of the Voluntary National Retail Food Regulatory Program Standards.

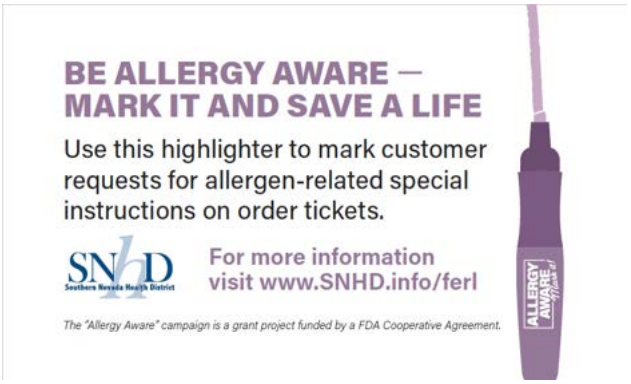
SNHD Team Members created educational materials and an approach to disseminate information to operators. These materials were presented to Retail Food Establishments in 2019 and were made available for print and download. This Appendix contains full-sized versions of printable resources, which are also available on WWW.SNHD.info

Menu insert image to prompt restaurant guests to declare any food allergies.

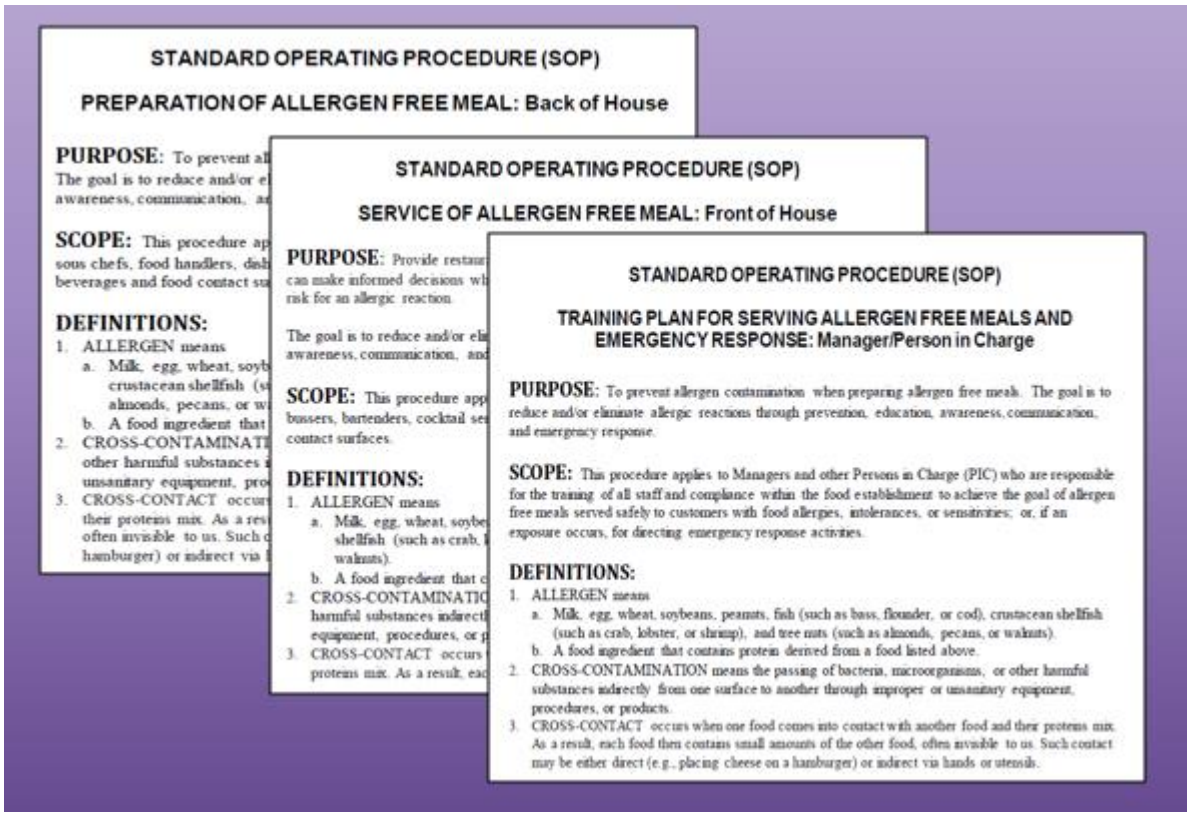
Image from Allergen Awareness Video with Chef Keith Norman, an author and leader in allergen awareness in the food industry

As a promotional item, we developed a highlighter for food establishments to mark orders that contain modifications due to allergens.





Standard Operating Procedures (SOPs) with a fillable Menu Guide and a Training Video were created as resources to aid in the training of staff duties in response to a consumer with a food allergy.



ALLERGY AWARE
KNOW YOUR MENU

8 ALLERGENS

MILK | EGGS | FISH (e.g., bass, cod, flounder) | CRUSTACEAN SHELLFISH (e.g., crab, lobster, shrimp) | TREE NUTS (e.g., almonds, walnuts, pecans) | PEANUTS | WHEAT | SOY

WHEN A CUSTOMER INFORMS YOU OF A FOOD ALLERGY

- ✔ Refer food allergy concern to Person in Charge.
- ✔ Remember to check the food preparation procedures for ANY possible cross contact, which can include frying the item in question in the same oil as an item that contains an allergen.
- ✔ If a food item is returned to the kitchen due to an allergen, DO NOT attempt to remove the allergen and send the food back. Trace amounts of allergens can trigger an allergic reaction.

SYMPTOMS

IF A GUEST HAS A REACTION, **CALL 911 IMMEDIATELY**

- **RASH, HIVES, ITCHING, TINGLING**
- **SWELLING**
- **WHEEZING, DIFFICULTY BREATHING**
- **LOSS OF CONSCIOUSNESS, DIZZY, FAINT**
- **ANAPHYLAXIS** *Confusion, slurred speech, pale skin, low blood pressure, tightening of the throat, difficulty swallowing*

SNHD Southern Nevada Health District

FOOD ESTABLISHMENT RESOURCE LIBRARY
www.SNHD.info/ferl

ESTE CONSIENTE DE LAS ALERGIAS

CONOZCA SU MENÚ

8 ALÉRGENOS

LECHE | **HUEVOS** | **PESCADO** *(ej., lubina, bacalao, lenguado)* | **MARISCOS, CRUSTÁCEOS** *(ej., cangrejo, langosta, camarones)* | **NUECES DE ÁRBOL** *(ej., almendras nueces, pecanas)* | **CACAHUATES** | **TRIGO** | **SOYA**

CUANDO UN CLIENTE LE INFORMA SOBRE ALERGIAS A LOS ALIMENTOS

- Consulte la preocupación de la alergia a los alimentos a la persona encargada.
- Recuerde revisar los procedimientos de preparación de alimentos para CUALQUIER posible contacto cruzado, como puede ser freír el alimento en cuestión en el mismo aceite que un alimento que contiene un alérgeno.
- Si un alimento se devuelve a la cocina debido a un alérgeno, NO intente eliminar el alérgeno y regresarlo al cliente. Pequeñas cantidades de alérgenos pueden desencadenar una reacción alérgica.

SÍNTOMAS

SI EL CLIENTE TIENE UNA REACCIÓN,
LLAME AL 911 INMEDIATAMENTE

ERUPCIÓN, URTICARIA, PICAZÓN, HORMIGUEO | **HINCHAZÓN** | **SIBILANCIAS, DIFICULTAD PARA RESPIRAR** | **PÉRDIDA DE CONOCIMIENTO, MAREO, DESMAYO** | **ANAFILAXIA** *Confusión, dificultad para hablar, piel pálida, presión arterial baja, estrechamiento de la garganta, dificultad para tragar*

Southern Nevada Health District

BIBLIOTECA DE RECURSOS PARA ESTABLECIMIENTOS DE ALIMENTOS
ww.SNHD.info/ferl

The Food Allergen Warning! sign was created For Retail Food Establishments that may not be able to alter, separate or omit ingredients that are known to be major food allergens from their menu options.

Allergy Aware: What's Hiding in Your Menu?
Allergen Guide

This guide is designed to provide restaurant guests with food allergies, intolerances, or sensitivities with accurate information about food ingredients, so they can make informed decisions when ordering.

Contact Manager for any additional ingredient information

The Eight Major Food Allergens Include: milk, egg, wheat, soy, peanuts, fish (such as bass, flounder, or cod), crustacean shellfish (such as crab, lobster, or shrimp), and tree nuts (such as almonds, pecans, or walnuts).

There are over 160 known food allergens.

This addresses the EIGHT that cause over 90 percent of all allergic reactions in food.

IF YOU ARE ALLERGIC TO ANY OTHER INGREDIENT PLEASE NOTIFY YOUR SERVER RIGHT AWAY!

EXAMPLE CHART:

Menu items		**Allergens**							
		Egg	**Fish**	**Crustacean Shellfish**	**Milk**	**Soy**	**Peanuts**	**Tree Nuts**	**Wheat**
Almond Cookies		☑			☑		★	☑	☑
Bacon Strips						☑			
Bread	*Bagels*								☑
	Corn Tortilla Chips					☑		★	
	Gluten Free Biscuit	★			☑	★			
	Sourdough				☑				☑
Butter					☑				
Cheese	*American*				☑	☑			
	Provolone				☑				
	Cheddar				☑				
Christine's Chicken Nuggets					☑		☑		☑
Croutons					☑		★	★	☑
Fryer oil							☑		
Jodi's Jerk Chicken		★				☑		☑	
Meredith's Mac and Cheese		☑			☑	☑			☑
Mikki's Mahi Mahi Tacos		☑	☑	★	☑	☑			☑
Nancy's Napa Salad	Salad (*No Dressing*)				☑			☑	☑
	Salad (***with*** *Dressing*)				☑		☑	☑	☑
Onion Rings		★	★		☑	☑		☑	
Pot Roast					☑	☑			☑
Rachel's Ravioli with Pesto Sauce		☑			☑	☑		☑	☑
Vegetable Medley									

☑ = Contains this Allergen
★ = May contain this allergen or is processed in a facility or on equipment with this allergen.

	Allergens							
Menu items	Egg	Fish	Crustacean Shellfish	Milk	Soy	Peanuts	Tree Nuts	Wheat

STANDARD OPERATING PROCEDURE (SOP)

ALLERGEN FREE MEAL PREPARATION

PURPOSE: To prevent allergen contamination when preparing allergen free meals.
The goal is to reduce and/or eliminate allergic reactions through prevention, education, awareness, communication, and emergency response.

SCOPE: This procedure applies to food preparation staff such as: line cooks, chefs, sous chefs, food handlers, dishwashers, porters, and anyone else who contacts food and beverages and food contact surfaces in the kitchen area.

DEFINITIONS:

1. ALLERGEN means
    a. Milk, egg, wheat, soybeans, peanuts, fish (such as bass, flounder, or cod), crustacean shellfish (such as crab, lobster, or shrimp), and tree nuts (such as almonds, pecans, or walnuts).
    b. A food ingredient that contains protein derived from a food listed above.
2. CROSS-CONTAMINATION means the passing of bacteria, microorganisms, or other harmful substances indirectly from one surface to another through improper or unsanitary equipment, procedures, or products.
3. CROSS-CONTACT occurs when one food comes into contact with another food and their proteins mix. As a result, each food then contains small amounts of the other food, often invisible to us. Such contact may be either direct (e.g., placing cheese on a hamburger) or indirect via hands or utensils.

INSTRUCTIONS:

<u>Pre-service training</u>

1. All staff must receive training from Person in Charge (PIC) PRIOR TO preparing allergen-free meals.
2. Staff shall receive training regarding:
    a. The procedures in this SOP.
    b. The eight major food allergens.
    c. How to receive shipments and identify cross-contact that may have occurred during transport and proper methods of storage to prevent cross-contact.
    d. Which foods in the facility contain the eight major food allergens.
    e. Personal hygiene steps to reduce cross-contact.
    f. What equipment is available to prepare allergen-free meals.
    g. Cleaning and sanitizing steps to prevent cross-contact.
    h. How to mark or otherwise identify an allergen-free meal.

<u>Operations (special instructions):</u>

1. Follow Southern Nevada Health District regulations.
2. Be aware of the establishment's ability to prepare allergen free meal.
    a. Review a list of all ingredients and products to determine which products and ingredients, including sub-ingredients, contain allergens.
    b. Evaluate each step in the process (receiving, storage, preparation, and service), noting paths of allergenic ingredients.
    c. Identify ingredients and processing aids, such as spray oils and release agents, the establishment utilizes that may contain allergenic ingredients.

Steps in Preparing the Allergen-Free Meal

1. Wash, rinse, and sanitize all areas and equipment that will be used for preparing allergen-free meals even if those surfaces had already been previously cleaned for normal use.
2. Wash hands thoroughly and put on a clean pair of gloves before preparing an allergen-free meal. It may be necessary to change aprons as well.
3. Use dedicated equipment or physically separate products to prevent cross-contact.
   a. Use color-coded or specially-marked supplies, uniforms, equipment, and utensils designated for preparing allergen-free meal.
   b. Avoid using same cooking medium (e.g., oil or water) and surface (e.g., grill, prep table) when processing both ingredients with and without allergens.
4. Use ingredients that have been designated "allergen free" on their packages or otherwise determined to be safe in allergen-free meals.
5. Prepare food in a manner that eliminates cross-contact. All preparation, including garnishes, should be done by only one food handler who is dedicated to ensuring the meal is allergen free and who is not multi-tasking.
6. Cover meal with a clean lid to prevent cross-contact and mark or otherwise identify as an allergen-free meal. No additional handling should be done once the meal has been covered.
7. Notify PIC or designated employee once allergen-free meal is prepared and ready for service.
8. Wash, rinse, sanitize, and store special equipment for allergen-free meals so that the equipment is ready and available for next use.

CORRECTIVE ACTION:

1. Discard any food that may be contaminated by cross-contact during preparation and start over with a clean plate. Do not reuse any food (e.g., using same bun or replace garnishes).
2. Retrain any foodservice employee found not following the procedures in this SOP.
3. Retrain employee to become aware of the top eight allergenic ingredients.

RESPONSIBILITIES:

PIC or designated employee will ensure all staff are trained and following this SOP. This may be done using allergy drills or quizzing of staff.

DATE IMPLEMENTED: _____ APPROVED BY: _____

STANDARD OPERATING PROCEDURE (SOP)

ALLERGEN FREE MEAL SERVICE

PURPOSE: Provide restaurant patrons with accurate information about food ingredients so they can make informed decisions when ordering. Incorrect or incomplete information puts these guests at risk for an allergic reaction.

The goal is to reduce and/or eliminate allergic reactions through prevention, education, awareness, communication, and emergency response.

SCOPE: This procedure applies to food service staff such as: wait staff, hostesses, bussers, bartenders, cocktail servers, and anyone who contacts food and beverages and food contact surfaces.

DEFINITIONS:

1. ALLERGEN means
   a. Milk, egg, wheat, soybeans, peanuts, fish (such as bass, flounder, or cod), crustacean shellfish (such as crab, lobster, or shrimp), and tree nuts (such as almonds, pecans, or walnuts).
   b. A food ingredient that contains protein derived from a food listed above.
2. CROSS-CONTAMINATION means the passing of bacteria, microorganisms, or other harmful substances indirectly from one surface to another through improper or unsanitary equipment, procedures, or products.
3. CROSS-CONTACT occurs when one food comes into contact with another food and their proteins mix. As a result, each food then contains small amounts of the other food, often invisible to us. Such contact may be either direct (e.g., placing cheese on a hamburger) or indirect via hands or utensils.

INSTRUCTIONS:

Pre-service training

1. All staff must receive training from Person in Charge (PIC) PRIOR TO interacting with guests.
2. Staff shall receive training regarding:
   a. The procedures in this SOP.
   b. The eight major food allergens.
   c. The signs/symptoms of an allergic reaction.
3. Follow Southern Nevada Health District regulations.

Order Taking

1. When guests inform the staff that they have a food allergy, intolerance, or sensitivity, immediately activate the procedure for handling the special order.
2. Notify the PIC or designated person (such as managers, chefs, or key employees) that there is a guest with a food allergy, intolerance, or sensitivity.
3. Provide the guest with information about the ingredients in the menu selections.
   a. Identify for and inform the guest of the menu selections that contain or may contain the specific allergen(s) of concern.
   b. Inform the guest whether the food establishment can prepare the allergen-free meal.
4. Make a written notation on the guest ticket. Flag it with something very visible such as a bold-colored line or special instructions written at the top of the ticket. See facility-specific instructions regarding methods of submitting orders to the kitchen.

Service to Guest

1. Once the special allergen-free meal is prepared and ready for service, verify that the meal is allergen free with kitchen staff. The special meal should not be removed from the kitchen/service window by anyone other than the designated person.
2. When the meal is served to the guest, ensure no cross-contact occurs during transportation.
   a. Wash hands before touching the allergen-free special order.
   b. Do not place on same tray as other food items.
   c. Refrain from using equipment that has not been properly designated for use with allergen-free meal preparation (such as cheese graters, peppermills, tongs, etc.)
3. Verify with the guest that the meal meets their needs before serving.

Emergency Response

1. If the guest appears to be suffering from an adverse reaction, immediately call emergency medical services (911).
2. Notify the PIC.
3. Remain with the guest until medical services arrives.
4. Document any self-treatment (such as an EpiPen) conducted by the guest or others.

RESPONSIBILITIES:
PIC or designated employee will ensure all staff are trained and following this SOP. This may be done using allergy drills or quizzing of staff.

DATE IMPLEMENTED: _____ APPROVED BY: _____

STANDARD OPERATING PROCEDURE (SOP)

TRAINING PLAN FOR SERVING ALLERGEN FREE MEALS AND EMERGENCY RESPONSE: Manager/Person in Charge

PURPOSE: To prevent allergen contamination when preparing allergen free meals. The goal is to reduce and/or eliminate allergic reactions through prevention, education, awareness, communication, and emergency response.

SCOPE: This procedure applies to Managers and other Persons in Charge (PIC) who are responsible for the training of all staff and compliance within the food establishment to achieve the goal of allergen free meals served safely to customers with food allergies, intolerances, or sensitivities; or, if an exposure occurs, for directing emergency response activities.

DEFINITIONS:

1. ALLERGEN means
   a. Milk, egg, wheat, soybeans, peanuts, fish (such as bass, flounder, or cod), crustacean shellfish (such as crab, lobster, or shrimp), and tree nuts (such as almonds, pecans, or walnuts).
   b. A food ingredient that contains protein derived from a food listed above.
2. CROSS-CONTAMINATION means the passing of bacteria, microorganisms, or other harmful substances indirectly from one surface to another through improper or unsanitary equipment, procedures, or products.
3. CROSS-CONTACT occurs when one food comes into contact with another food and their proteins mix. As a result, each food then contains small amounts of the other food, often invisible to us. Such contact may be either direct (e.g., placing cheese on a hamburger) or indirect via hands or utensils.

INSTRUCTIONS:

Training Development

The Manager or PIC shall create a comprehensive training program for food preparation (Back of House) and service (Front of House) staff. This program shall include training on the following specific issues:

1. Knowledge of the eight major food allergens and how to recognize them, including hidden allergens.
2. Identifying menu items that contain or may contain any of the eight major food allergens. Update information when substituting ingredients or adding new food items to the menu.
3. Discussion of facility's abilities to serve allergen-free meals and limitations that may present.
4. Receiving and storage of food to prevent cross-contact.
5. Server's role when interacting with guests to ascertain their needs for allergen-free meals.
   a. Identifying any allergens of concern
   b. Provide information regarding allergen presence in menu items (may suggest menu items that are or can be prepared free of the allergen(s) of concern.)
   c. Documenting the guest's allergy on order tickets and how to interpret those marking in the kitchen.
   d. Notify the PIC.
6. An overview of the duties the Person in Charge during service.
7. How to prepare an allergen-free meal, including:
   a. Personal hygiene, including handwashing, glove use, and aprons or clothing protection.
   b. Cleaning of shared equipment, or if possible, use of segregated allergen-free equipment and utensils.
   c. Food segregation to prevent cross-contact.
   d. Food and garnish plating.
   e. How to document and communicate the meal is, indeed, free of the guest's allergen.
8. How to serve an allergen-free meal to guest, including:
   a. Communicating with the kitchen regarding the order.
   b. Transporting the order in a manner to prevent cross-contact.
   c. Communicating with and subsequent service of the meal to the guest to ensure the meal meets their needs.
9. Recognition of the signs and symptoms of an allergic reaction to food.

10. Actions to take when a guest appears to be having an allergic reaction, up to and including anaphylaxis. Roles and responsibilities during an emergency shall be clearly delineated.
11. Laws and Regulations that apply to the service of food as it relates to allergy prevention.

Training Delivery and Documentation

The Manager or PIC shall use the developed training program to train foodservice employees.

1. Document the training with sign-in sheets or other written means.
2. Assess the learning through the use of quizzing or operational drills/practice.
3. Make corrections that will ensure the training is effective and leads to long-term information retention and application.

Operations

1. Ensure that products are received and stored in a manner that prevents cross-contact. If there appears to have been cross-contact in the delivery vehicle, the Manager or PIC shall reject all or part of the delivery.
2. Monitor the flow of food in the facility. Identify points in which cross-contact can occur unintentionally and develop a corrective action.
3. Implement cleaning and sanitizing procedures that reduce the likelihood of contamination with allergenic substances on food contact surfaces.
4. Maintain a set of clean, allergen-free equipment to be used solely when preparing allergen-free meals.
5. Observe staff for adherence to policies and procedures. Provide corrections if system failures are observed.
6. If the Manager or PIC is not able to personally attend to the duty, assign a designated employee to handle all special orders at all stages or order, prep, and service.

Person in Charge: During Service

1. The PIC or designated person shall be notified of all allergen-related special requests. Once notified, the PIC shall:
    a. Communicate directly with guests to confirm allergen(s) of concern.
    b. Provide any available information regarding allergen presence in menu items (e.g., Menu Guides).
    c. Confirm ability to provide allergen-free meal.
    d. Suggest allergen-free options on menu, if available.
2. If facility can accommodate the guests' request, the PIC shall:
    a. Review special-order ticketing to confirm accuracy of written instructions.
    b. Communicate to BOH staff that there will be an incoming special-order ticket or special instructions.
    c. Monitor preparation of allergen-free meal.
    d. Once the allergen-free meal is ready for service, inspect the prepared meal to ensure ingredients containing the allergen were omitted during preparation. Only the original Chef or PIC shall garnish or provide final preparations to allergen-free meal.
    e. Deliver allergen-free meal directly to guest. A cover should be used over the prepared meal to prevent cross contamination during delivery.
    f. Check back with guest to ensure needs have been met.

Emergency Response

1. The Manager or PIC shall have a plan in place to respond to an allergy-related emergency.
2. Each staff member should be aware of any role they play during an emergency.
3. Activate an emergency response if notified by a guest or staff member that an allergic reaction is occurring.
4. Ensure that each staff member is performing their duties, including:
    a. Calling emergency response and relaying information.
    b. Greeting and directing emergency responders.
    c. Staying with the guest pending arrival of emergency responders.
    d. Providing any aid requested by emergency responders or the guest.
    e. Documenting the details of the occurrence for liability and training purposes.

5. After the emergency is over, debrief staff as to how effective their response was.
6. Create any modifications to the emergency response plan, as necessary.

MONITORING:

1. Manager or PIC will maintain the documentation of training received by staff.
2. Manager or PIC will routinely assess staff knowledge through verbal or written quizzing/discussions or practical operational assessment of skills.

CORRECTIVE ACTION:

1. If staff appears to have lost knowledge, retrain any foodservice employee found not following the procedures in this SOP.
2. Create a system to ensure only staff that is properly trained serve or cook for guests with food allergies.
3. If needed, modify the emergency response plan.

VERIFICATION AND RECORD KEEPING:

The foodservice manager will complete documentation of initial and ongoing training of staff. They will document occurrences of non-compliance to use as learning tools or other corrective actions deemed necessary by the facility.

DATE IMPLEMENTED: _____ APPROVED BY: _____

Presenter	Date(s)	Presentation Title	Conference Title	Conference Location
2015				
Christine Sylvis	February 2015	Competency vs. Consistency – The Roles of Standardization and Credentialing in Food Inspection Programs	ACDEHSA Southwest Environmental Health Conference	Laughlin, NV
Robert Urzi	February 2015	Food Safety Inspections at Special Events	Hospitality College, University of Nevada, Las Vegas (UNLV)	Las Vegas, NV
Christine Sylvis	July 2015	Pushing Through the Hurdles: Advice to Meet the FDA Retail Program Standards	NEHA AEC 2015	Orlando, FL
Christine Sylvis	September 23, 2015	Variance/Waivers – What We Do	2015 FDA Pacific Region Retail Food Seminar	Helena, MT
2016				
Robert Urzi	February 2016	Food Safety Inspections at Special Events	Hospitality College, University of Nevada, Las Vegas (UNLV)	Las Vegas, NV
Nancy-Ann Hall	April 27, 2016	This Presentation is Gluten Free - A Detailed Look at Food Labeling	NVEHA-NFSTF 2016 Joint Education Conference	Las Vegas, NV
Lauren DiPrete	June 2016	Social Media Monitoring to Guide Inspections	NEHA AEC 2016	San Antonio, TX
Christine Sylvis	September 2016	Improving the Quality of Inspections	2016 FDA Pacific Region Retail Food Seminar	Reno, NV
Lauren DiPrete	September 2016	Using Social Media to Predict Food-borne Illness and Drive Inspections	2016 FDA Pacific Region Retail Food Seminar	Reno, NV
Christine Sylvis	September 2016	Collaboration and the Program Standards	2016 FDA Pacific Region Retail Food Seminar	Reno, NV
Lauren DiPrete	November 16, 2016	Using Social Media to Predict Food-borne Illness and Guide Inspections	Maricopa County Staff Conference	Webinar
2017				
Robert Urzi	February 15, 2017	Food Safety Inspections at Special Events	Hospitality College, University of Nevada, Las Vegas (UNLV)	Las Vegas, NV
Aminta Martinez-Hermosilla	April 11, 2017	An Educational Approach to Food Safety for At-Risk Youth	NVEHA-NFSTF 2017 Joint Education Conference	Reno, NV
Jodi Brounstein	April 12, 2017	Electric Daisy Carnival	NVEHA-NFSTF 2017 Joint Education Conference	Reno, NV
Valerie Cohen & Desiree Hiestand	July 11, 2017	Food Safety Culture Starts During the Permitting Process	NEHA AEC 2017	Grand Rapids, MI
Larry Rogers	July 11, 2017	Risk on Wheels	NEHA AEC 2017	Grand Rapids, MI
Brenda Welch	July 11, 2017	The Rat Pack (Las Vegas) Boulder City, NV	NEHA AEC 2017	Grand Rapids, MI
Nancy-Ann Hall	July 13, 2017	This Presentation is Gluten Free - A Detailed Look at Food Labeling	NEHA AEC 2017	Grand Rapids, MI
Valerie Cohen & Desiree Hiestand	July 13, 2017	A Novel Approach to Assessing Food Safety Knowledge: Food Safety Assessment Meeting (FSAM) Workshop	NEHA AEC 2017	Grand Rapids, MI

Presenter	Date(s)	Presentation Title	Conference Title	Conference Location
Christine Sylvis	July 2017	Creating Collaborative Connections: A guide to Improve Program Effectiveness	NEHA AEC 2017	Grand Rapids, MI
Jodi Brounstein	July 2017	Electric Daisy Carnival	NEHA AEC 2017	Grand Rapids, MI
Christine Sylvis	September 2017	FDA's Retail Program Continuous Improvement Goals	2017 FDA Pacific Region Retail Food Seminar	Spokane, WA
Lauren DiPrete	November 6, 2017	Environmental Health Specialists Network (EHS-Net): Contributions to Foodborne Illness Outbreak Investigation and Prevention	Integrated Foodborne Outbreak Response Management - InFORM 2017 Conference	Garden Grove, CA
2018				
Robert Urzi	February 14, 2018	Food Safety Inspections at Special Events	Hospitality College, University of Nevada, Las Vegas (UNLV)	Las Vegas, NV
Lauren DiPrete	March 2018	Improving Food Safety and Public Health with a Novel Digital Solution	University of Georgia Center for Food Safety Conference for Food Safety	Atlanta, GA
Nancy-Ann Hall	April 24, 2018	What IS That? The Rise of Unconventional Ingredients and Modern Trends in Food	NVEHA-NFSTF 2018 Joint Education Conference	Las Vegas, NV
Jacquelyn Raiche-Curl	April 25, 2018	Active Managerial Control	NVEHA-NFSTF 2018 Joint Education Conference	Las Vegas, NV
Kimberly Svedberg	June 26, 2018	Bait and Switch: Fish Fraud in Retail Food Establishments and What to Do If You Catch It	NEHA AEC 2018	Anaheim, CA
Lauren DiPrete	June 26, 2018	EHS-Net's Cooperative Agreement with State and Local Programs: Improving Retail Food Safety	NEHA AEC 2018	Anaheim, CA
Nancy-Ann Hall	June 28, 2018	What IS That? The Rise of Unconventional Ingredients and Modern Trends in Food	NEHA AEC 2018	Anaheim, CA
Lauren DiPrete	June 2018	Evaluating the Most Common Risk Factor to Inform Prevention Strategies	NEHA AEC 2018	Anaheim, CA
Christine Sylvis	August 1, 2018	Standard 9: Program Assessment	NACCHO Retail Program Standards Mentorship Program Meeting	Washington, DC
Christine Sylvis	September 11, 2018	Sustaining Efforts to Achieve Conformance with the Retail Program Standards	2018 FDA Pacific Region Retail Food Seminar	Boise, ID
Tamara Giannini	September 13, 2018	Effective Ways to Communicate with Retailers/Operators that do not have Control Over the Risk Factors	2018 FDA Pacific Region Retail Food Seminar	Boise, ID

Presenter	Date(s)	Presentation Title	Conference Title	Conference Location
2019				
Lauren DiPrete	January 30, 2019	Outbreak: What Happens in Vegas Doesn't Always Stay in Vegas	ACDEHSA Southwest Environmental Health Conference	Laughlin, NV
Christine Sylvis	January 2019	Power of Partnerships	ACDEHSA Southwest Environmental Health Conference	Laughlin, NV
Lauren DiPrete	February 6, 2019	Norovirus in a Las Vegas Resort	2019 PulseNet/ OutbreakNet West Coast Regional Meeting	San Diego, CA
Robert Urzi	February 13, 2019	Food Safety Inspections at Special Events	Hospitality College, University of Nevada, Las Vegas (UNLV)	Las Vegas, NV
Thomas San Nicolas	April 23, 2019	FSAM 2.0: Lessons learned from Developing a Video Tool Used to Provide Educational Outreach and Industry-Regulatory Interaction Prior to Permit Issuance	NVEHA-NVFSTF 2019 Joint Education Conference	Reno, NV
Karla Shoup	April 24, 2019	Home-Based Health Interventions and the Environmental Health Specialist	NVEHA-NVFSTF 2019 Joint Education Conference	Reno, NV
Valerie Cohen & Vanessa Ortiz-Rivera	April 24, 2019	Making the Video: Food Handler Safety Training Video Series	NVEHA-NVFSTF 2019 Joint Education Conference	Reno, NV
Jodi Brounstein & Nancy-Ann Hall	April 24, 2019	Allergen Awareness Intervention Strategy and Program Implementation	NVEHA-NFSTF 2019 Joint Education Conference	Reno, NV
Lauren DiPrete	May 1, 2019	NEARS Implementation: Before and After in Southern Nevada	NEARS Users Meeting	Denver, CO
Lauren DiPrete	May 2019	Machine-Learned Epidemiology: The Regulatory Perspective	2019 Food Safety Summit	Chicago, IL
Lauren DiPrete	June 2019	Norovirus Outbreak: What Happens in Vegas Doesn't Always Stay in Vegas	Arizona Infectious Diseases Conference	Phoenix, AZ
Lauren DiPrete	July 11, 2019	Revamping the Foodborne Illness Taskforce Team	NEHA AEC 2019	Nashville, TN
Christine Sylvis	July 11, 2019	Secrets to Success in Staying Active with the Retail Program Standards!	NEHA AEC 2019	Nashville, TN
Christine Sylvis	July 11, 2019	Calculating the Risks: Learning Lab on Retail Food Safety Risk Factor Studies	NEHA AEC 2019	Nashville, TN
Alexis Barajas, Raymond Campa & Nancy Chu	August 13, 2019	Standard 9: Program Assessment	NACCHO Retail Program Standards Mentorship Program End of the Year Meeting	Washington, DC
Lauren DiPrete	August 13, 2019	Local Outbreaks: What We Know and How to Prevent Them	Foodborne Illness Outbreak Prevention and Response Conference	Las Vegas, NV

Presenter	Date(s)	Presentation Title	Conference Title	Conference Location
Tanja Baldwin	August 14, 2019	Norovirus Outbreak: Start to Finish	Foodborne Illness Outbreak Prevention and Response Conference	Las Vegas, NV
Nikki Burns-Savage	August 14, 2019	Not Just a Written Procedure: Building and Implementing an Effective Employee Health Policy	Foodborne Illness Outbreak Prevention and Response Conference	Las Vegas, NV
Stephanie Hernandez	August 14, 2019	Food Contact Surface Sanitizing to Control Foodborne Illness	Foodborne Illness Outbreak Prevention and Response Conference	Las Vegas, NV
Jacquelyn Raiche-Curl	August 14, 2019	Active Managerial Control	Foodborne Illness Outbreak Prevention and Response Conference	Las Vegas, NV
Nancy-Ann Hall	August 14, 2019	New Regulation Requirements	Foodborne Illness Outbreak Prevention and Response Conference	Las Vegas, NV
Aaron DelCotto	September 2019	Making Food Safety a Priority in Restaurants	Risk Management Society Western Regional Conference	Las Vegas, NV
2020				
Robert Urzi	February 26, 2020	Food Safety Inspections at Special Events	Hospitality College, University of Nevada, Las Vegas (UNLV)	Las Vegas, NV

SOUTHERN NEVADA HEALTH DISTRICT

FOOD ESTABLISHMENT INSPECTION

Page 1 of ___

280 SOUTH DECATUR BLVD • LAS VEGAS, NV • 89107 • 702-759-1258 (DIRECT PLAN REVIEW) • 702-759-1110 (DIRECT FOOD OPS •

FACILITY INFORMATION

PERMIT #	ESTABLISHMENT NAME	PHONE #	EST. SQUARE FOOTAGE	PRIMARY EHS

ADDRESS	RISK CAT.	P.E. Code	DISTRICT	LOCATION	MILES

NEVADA CLEAN INDOOR AIR ACT: ☐ COMPLIANCE REQUIRED ☐ EXEMPT

CONTACT PERSON:

CURRENT SERVICE	EHS	SERVICE	DATE	TIME IN	TIME OUT	TRAVEL MIN	DEMERITS	GRADE	HEALTH CARDS	RESULT

OPEN TIME	CLOSE TIME	CAPACITY	SEWER	WATER	PERMIT STATUS	FUTURE ACTION	ACTION	DATE
			M	M				

SPECIAL NOTES
SPECIAL PROCESSES

Imminent Health Hazards - Notify SNHD and cease Operations as Directed

- ☐ Interruption of electrical service
- ☐ No potable water or hot water
- ☐ Gross unsanitary occurrence or conditions including pest
- ☐ Sewage or liquid waste not disposed of in an approved manner
- ☐ Lack of adequate refrigeration
- ☐ Lack of adequate employee toilets and handwashing
- ☐ Misuse of poisonous and toxic materials
- ☐ Suspected foodborne illness outbreak
- ☐ Emergency such as fire and/or flood
- ☐ Other condition or circumstance that may endanger public health

CT = Cooking temp. **HH** = Hot Holding temp. **CH** = Cold Holding temp. **RH** = ReHeat temp. **TC** = Time as Control temp. **COOL** = Cooling temp.

Temperatures

Food	Temperature	Code	Food	Temperature	Code	Food	Temperature	Code

IN = In compliance **OUT** = Not In compliance **N/O** = Not observed **N/A** = Not applicable **COS** = Corrected on-site during inspection **R** = Repeat violation

	SECTION 1 - The Critical Violations listed below are to be assessed 5 demerits for each violation	IN	OUT	COS	NO	NA	R
1	Verifiable time as a control with approved procedure when in use. Operational plan, waiver or variance approved and followed when required. Operating within the parameters of the health permit.	☐	☐	☐	☐	☐	☐
2	Handwashing (as required, when required, proper glove use, no bare hand contact of ready to eat foods). Food handler health restrictions as required.	☐	☐	☐	☐	☐	☐
3	Commercially manufactured food from approved source with required labels. Parasite destruction as required. Potentially hazardous foods/time temperature control for safety (PHF/TCS) received at proper temperature.	☐	☐	☐	☐	☐	☐
4	Hot and cold running water from approved source as required.	☐	☐	☐	☐	☐	☐
5	Imminently dangerous cross connection or backflow. Wastewater and sewage disposed into public sewer or approved facility.	☐	☐	☐	☐	☐	☐
6	Food wholesome; not spoiled, contaminated, or adulterated.	☐	☐	☐	☐	☐	☐
7	PHF/TCSs cooked and reheated to proper temperatures.	☐	☐	☐	☐	☐	☐
8	PHF/TCSs properly cooled.	☐	☐	☐	☐	☐	☐
9	PHF/TCSs at proper temperatures during storage, display, service, transport, and holding.	☐	☐	☐	☐	☐	☐
	SECTION 2 - The Major Violations listed below are to be assessed 3 demerits for each violation	**IN**	**OUT**	**COS**	**NO**	**NA**	**R**
10	Food and warewashing equipment approved, properly designed, constructed and installed.	☐	☐	☐	☐	☐	☐
11	Food protected from potential contamination during storage and preparation.	☐	☐	☐	☐	☐	☐
12	Food protected from potential contamination by chemicals. Toxic items properly labeled, stored and used.	☐	☐	☐	☐	☐	☐
13	Food protected from potential contamination by employees and consumers.	☐	☐	☐	☐	☐	☐
14	Kitchenware and food contact surfaces of equipment properly washed, rinsed, sanitized and air dried. Equipment for warewashing operated and maintained. Sanitizer solution provided and maintained as required.	☐	☐	☐	☐	☐	☐
15	Handwashing facilities adequate in number, stocked, accessible, and limited to handwashing only.	☐	☐	☐	☐	☐	☐
16	Effective pest control measures. Animals restricted as required.	☐	☐	☐	☐	☐	☐
17	Hot and cold holding equipment present; properly designed, maintained and operated.	☐	☐	☐	☐	☐	☐
18	Accurate thermometers (stem & hot/cold holding) provided and used.	☐	☐	☐	☐	☐	☐
19	PHF/TCSs properly thawed. Fruits and vegetables washed prior to preparation or service.	☐	☐	☐	☐	☐	☐
20	Single use items not reused or misused.	☐	☐	☐	☐	☐	☐
21	Person in charge available and knowledgeable/management certification. Food handler cards as required. Facility has an effective employee health policy.	☐	☐	☐	☐	☐	☐
22	Backflow prevention devices and methods in place and maintained.	☐	☐	☐	☐	☐	☐
23	Grade card and required signs posted conspicuously. Consumer advisory as required. Records/logs maintained and available when required. NCIAA compliant. PHFs labeled and dated as required. Food sold for offsite consumption labeled properly.	☐	☐	☐	☐	☐	☐

SNHD FOOD ESTABLISHMENT INSPECTIOI **Establishment Name:** **Date:** **Page 2 of** ___

SECTION 3 - Good Management Practices to Prevent Unsanitary Conditions		IN	OUT			NA	
24	Acceptable personal hygiene practices, clean outer garments, proper hair restraints used. Living quarters and child care completely separated from food service.	☐	☐			☐	
25	Non-PHF and food storage containers properly labeled and dated as required. Food stored off the floor when required. Non-PHF/TCS not spoiled and within shelf-life. Proper retail storage of chemicals.	☐	☐			☐	
26	Facilities for washing and sanitizing kitchenware approved, adequate, properly constructed, maintained and op	☐	☐			☐	
27	Appropriate sanitizer test kits provided and used. Equipment and ware washing thermometer(s) are required. Wiping cloths and linens stored and used properly.	☐	☐			☐	
28	Small wares and portable appliances approved, properly designed, in good repair.	☐	☐			☐	
29	Utensils, equipment, and single serve items properly handled, stored, and dispensed.	☐	☐			☐	
30	Nonfood contact surfaces and equipment properly constructed, installed, maintained and clean.	☐	☐			☐	
31	Restrooms, mop sink, and custodial areas maintained and clean. Premises maintained free of litter, unnecessary equipment, or personal effects. Trash areas adequate, pest proof, and clean.	☐	☐			☐	
32	Facility in sound condition and maintained (floors, walls, ceilings, plumbing, lighting, ventilation, etc.).	☐	☐			☐	

Observations and Corrective Actions

Violation	Corrective Action

Comments

Food establishment regulations (2010) and educational materials available at **www.SouthernNevadaHealthDistrict.org/ferl**

Section 1 Demerits	
Section 2 Demerits	
Total Demerits	
Inspection Grade	

☐ This grade resulted from a repeat critical or major violation.

Fee required to be paid within 10 business days or prior to

0 to 10 demerits = A (Identical consecutive critical or major violations shall be downgraded to next lower grade.)

11 to 20 demerits or identical consecutive critical or major violation = B; Re-inspection after 15 days, or sooner if requested. Inspection must result in 10 demerits or less, with no identical repeat critical or major violations.
Failure on re-inspection will result in a "C" grade with associated fee and may require a supervisory conference.

21 to 40 demerits = C; Re-inspection after 15 days, or sooner if requested. Inspection must result in 10 demerits or less, wit no identical repeat critical or major violations. **Failure on re-inspection will result in a closure of the facility with associated fee and may require a supervisory conference.**

41 or more demerits = Closure or Imminent Health Hazard requiring closure; All food activities must remain suspended unti approved by Health Authority. Re-inspection upon operator request must result in 10 demerits or less, with no identical repe critical or major violations. **Failure on re-inspection will result in continued closed status with associated fee and ma require a supervisory conference.**

Inspector name and phone number: | Reviewed By:

Received by (signature)	Received by (printed)	EHS (signature)

food FOR THOUGHT

ISSUE 1 – JANUARY 2020

At the Southern Nevada Health District, it is a top priority to provide open communication and partner with industry to reach our shared goal of safer food.

Fee schedule changes effective February 1

The Southern Nevada District Board of Health approved the following changes to the Environmental Health (EH) fee schedule effective February 1, 2020:

- C downgrade fee increased to $1,200
- Closure fee increased to $1,400
- New fees for expedited plan review inspections (dependent upon staff availability)

For a list of all EH fees, visit **www.snhd.info/eh-fees**.

HACCP plans to be enforced July 1

Hazard Analysis Critical Control Point (HACCP) plans for all special processes required by regulations will be enforced July 1, 2020. Information about this topic can be found at **www.snhd.info/haccp**.

EH training office changes name

The EH training office has a new name: Regulatory Support Office. This title better describes the diverse functions it provides the EH Division. In addition to providing internal and external training, staff members in the office review HACCP plans, waivers and labels; provide regulation interpretation; serve as liaison with federal, state and local partners; conduct research on emerging topics; oversee inspector standardization; and much more.

Vaping now prohibited in restaurants and more

The Nevada Clean Indoor Air Act was updated during the 2019 legislative session to include electronic vaping products, preventing their use in public places where cigarette use is not allowed.

For more information, and to download or request free signage, visit **www.gethealthyclarkcounty.org/nciaa**.

Food Safety Partnership meetings and trainings are free and open to all

Held quarterly at the Health District's main location (280 S. Decatur Blvd.), Food Safety Partnership (FSP) meetings provide an interactive platform to:

- Meet the EH leadership team
- Get clarification on regulatory requirements
- Get trained on hot topics
- Seek answers to questions

Free food safety training in English and Spanish is available after each FSP meeting.

- Training taught by Health District trainers
- Great refresher for lead staff and new managers
- Opportunity to get trained to train coworkers

For more information and to register for our next meeting and trainings, visit **www.snhd.info/ehrcp**.

Resources

Food Establishment Resource Library
www.snhd.info/feri

Food Handler Safety Training Books and Videos
www.snhd.info/food-handler

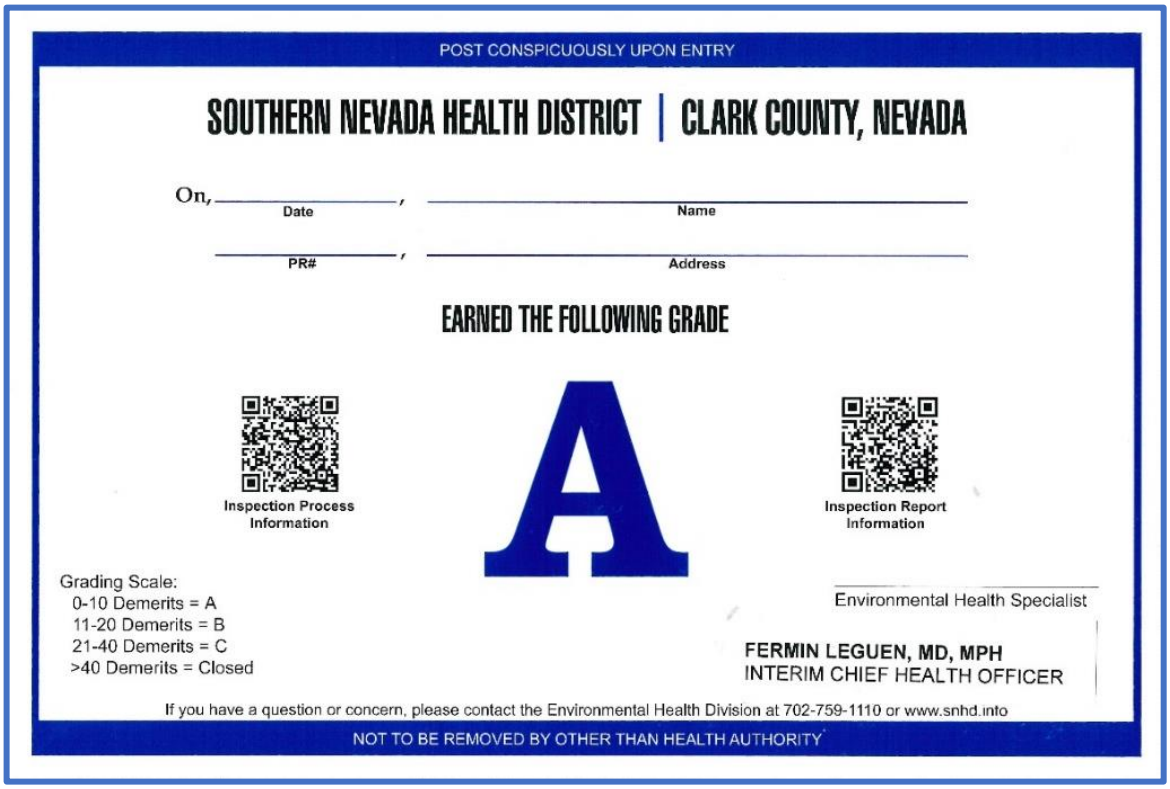
Food Recall Information
www.snhd.info/food-recalls

Social Media

- Facebook.com/southernnevadahealthdistrict
- Facebook.com/snhdfoodsafety
- Twitter.com/snhdinfo
- Twitter.com/snhdfoodsafety
- Instagram.com/southernnevadahealthdistrict
- Instagram.com/snhdfoodsafety

Contact Us

Business hours: (702) 759-0588
After hours: (702) 759-1600
Email: environmentalhealth@snhd.org



POST CONSPICUOUSLY UPON ENTRY

SOUTHERN NEVADA HEALTH DISTRICT | CLARK COUNTY, NEVADA

On, _____ Date , _____ Name

_____ PR# , _____ Address

EARNED THE FOLLOWING GRADE

Inspection Process Information

A

Inspection Report Information

Grading Scale:
0-10 Demerits = A
11-20 Demerits = B
21-40 Demerits = C
>40 Demerits = Closed

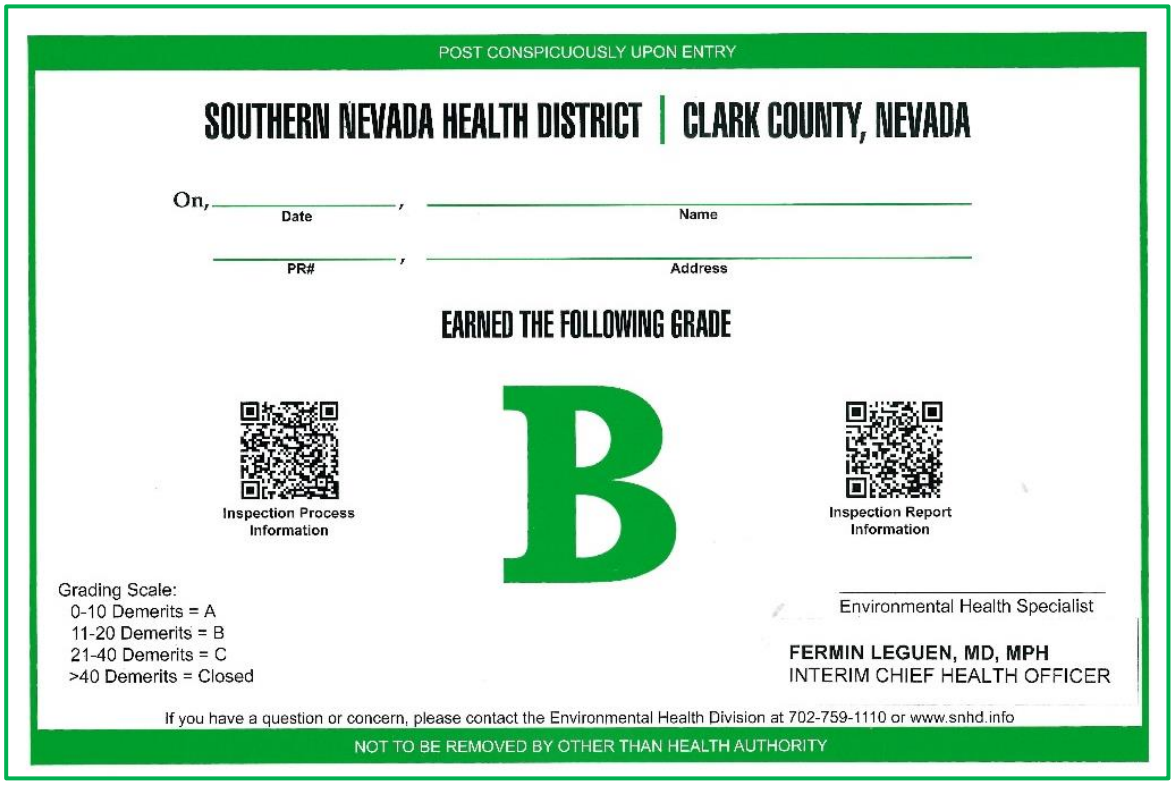
Environmental Health Specialist

FERMIN LEGUEN, MD, MPH
INTERIM CHIEF HEALTH OFFICER

If you have a question or concern, please contact the Environmental Health Division at 702-759-1110 or www.snhd.info

NOT TO BE REMOVED BY OTHER THAN HEALTH AUTHORITY

"A grade" means the establishment has earned between 0-10 demerits on their last inspection.



POST CONSPICUOUSLY UPON ENTRY

SOUTHERN NEVADA HEALTH DISTRICT | CLARK COUNTY, NEVADA

On, _____ Date , _____ Name

_____ PR# , _____ Address

EARNED THE FOLLOWING GRADE

Inspection Process Information

B

Inspection Report Information

Grading Scale:
0-10 Demerits = A
11-20 Demerits = B
21-40 Demerits = C
>40 Demerits = Closed

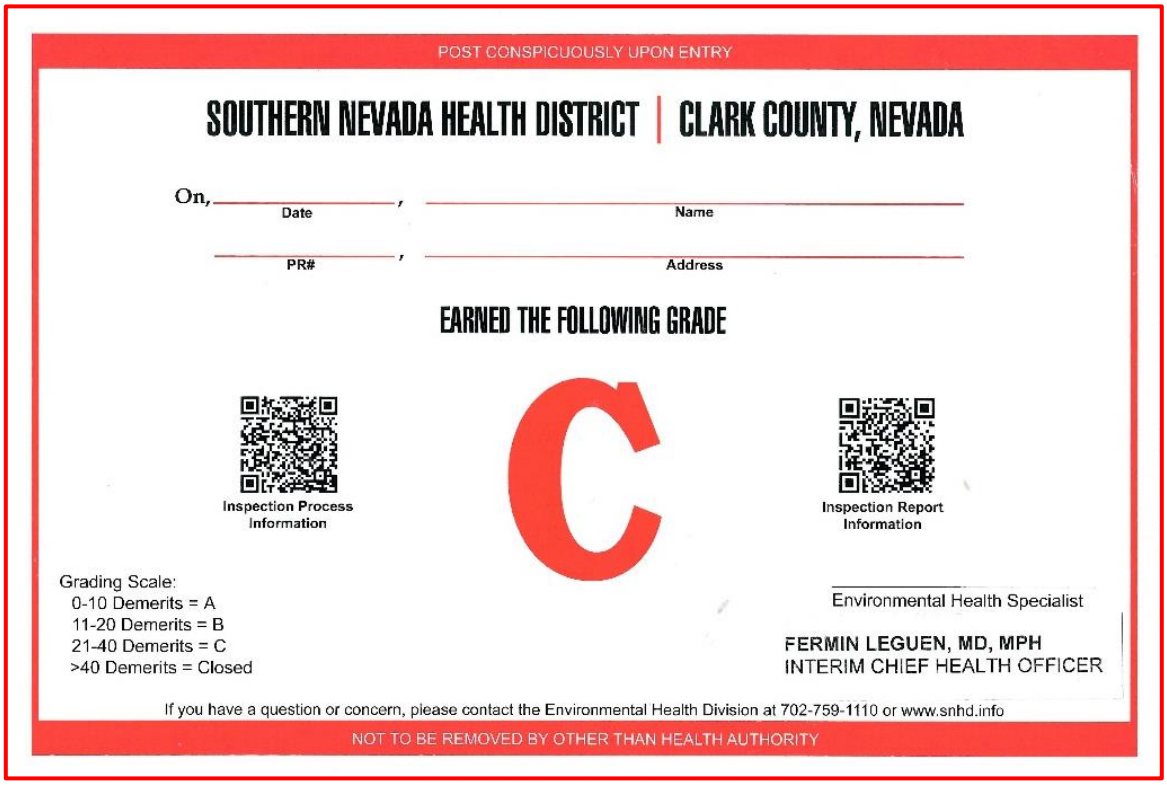
Environmental Health Specialist

FERMIN LEGUEN, MD, MPH
INTERIM CHIEF HEALTH OFFICER

If you have a question or concern, please contact the Environmental Health Division at 702-759-1110 or www.snhd.info

NOT TO BE REMOVED BY OTHER THAN HEALTH AUTHORITY

"B grade" downgrade means the establishment has earned between 11-20 demerits or has identical consecutive critical or major violations.



POST CONSPICUOUSLY UPON ENTRY

SOUTHERN NEVADA HEALTH DISTRICT | CLARK COUNTY, NEVADA

On, _____ (Date), _____ (Name)

_____ (PR#), _____ (Address)

EARNED THE FOLLOWING GRADE

Inspection Process Information

C

Inspection Report Information

Grading Scale:
0-10 Demerits = A
11-20 Demerits = B
21-40 Demerits = C
>40 Demerits = Closed

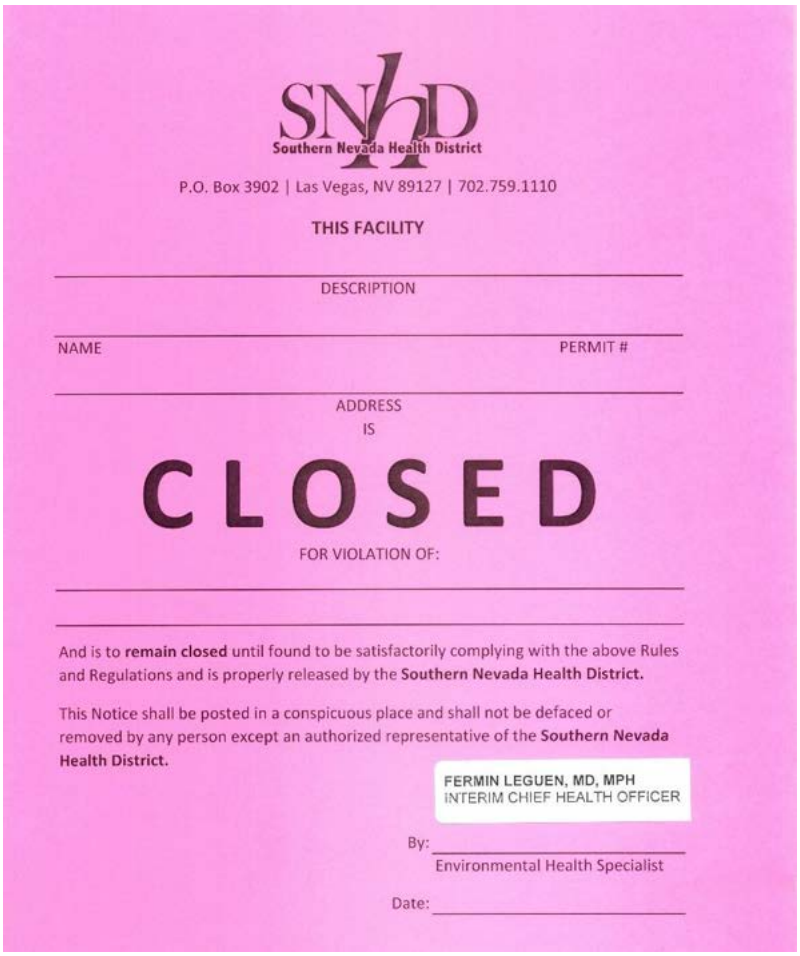
Environmental Health Specialist

FERMIN LEGUEN, MD, MPH
INTERIM CHIEF HEALTH OFFICER

If you have a question or concern, please contact the Environmental Health Division at 702-759-1110 or www.snhd.info

NOT TO BE REMOVED BY OTHER THAN HEALTH AUTHORITY

"C grade" downgrade means the establishment has earned between 21-40 demerits, has identical consecutive critical or major violations, or more than 10 demerits on a "B grade" reinspection.



Southern Nevada Health District

P.O. Box 3902 | Las Vegas, NV 89127 | 702.759.1110

THIS FACILITY

_____ DESCRIPTION

_____ NAME _____ PERMIT #

_____ ADDRESS

IS

CLOSED

FOR VIOLATION OF:

_____

_____

And is to **remain closed** until found to be satisfactorily complying with the above Rules and Regulations and is properly released by the **Southern Nevada Health District.**

This Notice shall be posted in a conspicuous place and shall not be defaced or removed by any person except an authorized representative of the **Southern Nevada Health District.**

FERMIN LEGUEN, MD, MPH
INTERIM CHIEF HEALTH OFFICER

By: _____
Environmental Health Specialist

Date: _____

A closure takes place when an establishment has 41 or more demerits, an imminent health hazard requiring closure, or failed a "C grade" reinspection.

An establishment must remain closed until approved to operate by the SNHD. The operator must correct all major and critical violations, pay the closure fee, and schedule a reinspection when ready. All closures require a full inspection prior to re-opening. The inspection must result in 10 demerits or fewer, with no identical repeat critical or major violations.

SOUTHERN NEVADA HEALTH DISTRICT
ENVIRONMENTAL HEALTH DIVISION
POLICY AND PROCEDURE

DIVISION: Environmental Health (EH) **PROGRAM:** Food Operations	**NUMBER:** EH-086
TITLE: Administrative Process	**EFFECTIVE DATE:** November 9, 2018
APPROVED BY DIVISION DIRECTOR: **Chris Saxton, MPH-EH, REHS**	**ORIGINATION DATE:** April 22, 2014
	LAST REVISION: None

I. PURPOSE

The purpose of this policy is to establish guidelines for a standardized approach of progressive enforcement actions for permitted facilities with a history of noncompliance.

II. SCOPE

This policy applies to the EH Division Food Operations Section.

III. POLICY

To protect public health, it is important that administrative action transpires when a facility has been noncompliant during inspections and that appropriate follow up occurs to ensure compliance (Reference A). The administrative process will be followed for noncompliant facilities, however the Food Operations EH Manager or EH Director may accelerate the administrative process when establishments operate without regard to public health. This process includes all permits in one location.

Each EHS shall notify their EH Supervisor of facilities requiring administrative process intervention and manage compliance dates, including future unannounced inspections in accordance with this policy.

EH Supervisors shall ensure facilities under their purview requiring administrative process intervention are appropriately managed. This includes an increased inspection frequency during the 18-month operational period following any step in the administrative process or the period after a facility has been readmitted into the administrative process (Attachment A).

Facility qualifications for Training Intervention, Supervisor, and Manager Conferences are guidelines and are based upon each facility's circumstances. EH Supervisors, working with their staff, will use these guidelines to determine the correct course of action.

Intervention training will generally be scheduled prior to the reinspection of a downgraded facility. When the facility has been closed and an appointment cannot be scheduled in a reasonable amount of time, a supervisor meeting will be required prior to reopening.

A missed appointment fee is applicable for all scheduled appointments; the assigned inspector is responsible for informing the facility.

IV. PROCEDURE

A. Intervention Training Conference:

1. A food establishment qualifies for an Intervention Training Conference for the following reasons.
   - **a.** EH Supervisor discretion.
   - **b.** C grade or closure on routine inspection post Food Safety Assessment Meeting (FSAM).
   - **c.** A combination of two consecutive C grades or closures on routine inspections.
   - **d.** Failed reinspection resulting in C grade or closure.
   - **e.** Hostile operator.
   - **f.** History of B or C grades.
   - **g.** Recurring uncontrolled foodborne illness (FBI) risk factor(s).
   - **h.** Facilities with multiple permits with a history of downgrades.
2. Intervention Training is conducted onsite at the food facility.
3. Attendance at the Intervention Training Conference is required by:
   - **a.** EH Training Officer.
   - **b.** Food establishment permit holder or verified designee, managers, and supervisors responsible for the operation of the food establishment. Permit holder, if unable to attend, will be required to provide a notarized letter giving designee responsibility for the permit(s).
4. Refer to the Administrative Process Workflow (Attachment A) for the agenda, enforcement actions, and documentation.

B. Food Supervisor Conference:

1. A food establishment qualifies for a Supervisor Conference for the following reasons:
   - **a.** EH Supervisor discretion.
   - **b.** Noncompliance post Intervention Training such as, but not limited to, a closure, C grade, or multiple B grades on unannounced inspections.
2. The Supervisor Conference is conducted at SNHD.
3. Attendance at the Supervisor Conference is required by:
   - **a.** Food Ops EH Supervisor and/or Senior EHS
   - **b.** Food Ops EHS(s) that conducted the last inspection
   - **c.** Optional: EHS(s) who have conducted recent inspections
   - **d.** Optional: EH Training Officer that provided onsite training intervention

e. Food establishment permit holder or verified designee, with notarized letter, responsible for the operation of the food establishment

4. Refer to the Administrative Process Workflow (Attachment A) for the agenda, enforcement actions, and documentation.

C. Manager Conference:

1. A food establishment qualifies for a Manager Conference for the following reasons:
   a. EH Supervisor discretion
   b. Noncompliance post Supervisor Conference such as, but not limited to, a closure or C grade, or multiple B grades on unannounced inspections.
2. The Manager Conference is conducted at SNHD.
3. Attendance at the Managerial Conference is required by:
   a. Food Ops EH Manager
   b. Food Ops EH Supervisor and/or Senior EHS
   c. Food Ops EHS(s) that conducted the last inspection
   d. Optional: EHS(s) who have conducted recent inspections
   e. Optional: EH Training Officer that provided onsite training intervention
   f. Food establishment permit holder or verified designee, with notarized letter, responsible for the operation of the food establishment
4. Refer to the Administrative Process Workflow (Attachment A) for the agenda, enforcement actions, and documentation.

D. Removal Criteria:

1. A food establishment qualifies for removal from the Administrative Process upon compliance at any step or noncompliance post Manager Conference.
   a. Compliance:
      i. A or B grades on three consecutive unannounced inspections within an 18-month operational period
      ii. EH Supervisor discretion

   Note: At the EH Supervisor's discretion, if a facility has met the criteria for removal but has not made sustained improvement and continues to represent an unacceptable risk to the public, the EH Supervisor may move the facility forward in the Administrative Process.

   b. Noncompliance post Manager Conference will result in a permit suspension, pending revocation (Reference B) when the following occurs:
      i. EH Manager discretion
      ii. Noncompliance post Manager Conference such as, but not limited to, a closure or C grade, or multiple B grades on unannounced inspections

E. Reinstatement:

When a facility, previously in the Administrative Process, has been removed after meeting the criteria outlined in Section D demonstrates loss of active managerial control of the risk factors for foodborne illness, resulting in a C downgrade or closure:

1. The facility may be reinstated into the Administrative Process at the Intervention Training step.
2. For extenuating circumstances, per EH Supervisor or EH Manager discretion, the facility may be reinstated at the Supervisory Conference or Managerial Conference step.
3. A facility reinstated into the Supervisor or Manager step is to remain in the Administrative Process for a period of 18 months, during which time, the facility must maintain A grades or show a trend of improvement.
4. An increased frequency of inspections remains throughout the entire time a facility is in the Administrative process.

V. REFERENCES

A. SNHD Regulations Governing the Sanitation of Food Establishments
B. Permit Suspension Pending Revocation Workflow

VI. ATTACHMENTS

A. Administrative Process Workflow
B. Administrative Process Photo Template and Sample
C. Intervention Training Conference Letter Template
D. Food Supervisor Conference Letter Template
E. Food Manager Conference Letter Template

Attachment A

Administrative Process Workflow

This workflow describes how to implement the Administrative Process Policy, EH-086.

I. DEFINITIONS:

A. **Active Managerial Control:** The purposeful incorporation of specific actions or procedures by industry management into the facility operation to attain control over foodborne illness risk factors.

B. **Certified Food Protection Manager (CFPM):** A person who is certified by a Food Protection Manager certification program that is evaluated and listed by a Conference for Food Protection recognized accrediting agency as conforming to the Conference for Food Protection Standards for Accreditation of Food Protection Manager Certification Programs.

C. **Compliant:** A facility is compliant when operating within Health Authority parameters; demonstrates active control of risk factors.

D. **Food Safety Assessment Meeting (FSAM):** An FSAM provides a forum for operators to demonstrate their food safety knowledge prior to the issuance of their permit or when an Environmental Health Specialist (EHS) deems it is necessary after the permit has been issued.

E. **Food Safety Consultant (FSC):** An independent professional advisor who works to guide and support the permitted establishment in complying with SNHD Regulations to maintain active managerial control of the facility.

F. **Foodborne Illness (FBI):** Adverse health effects caused by consuming contaminated food or beverage.

G. **Person in Charge (PIC):** The individual present at a food establishment who is responsible for the operation.

H. **Risk Factors:** The causes of foodborne illness.

II. INTERVENTION TRAINING CONFERENCE:

A. **Pre-Intervention Training Conference:**
1. Facility inspector will:
   a. Verify ownership in Envision Connect (EC), Business License for applicable jurisdiction, and Secretary of State.

b. Deliver to the Training Officer, printed reports for **all** actions (916, 914, 919, 902, etc.) at **all** affected permits in the facility for the last two years.
c. Email photos or location of photos of downgrade inspection(s) to the Training Officer. Photos must be in the approved template and should include critical and major violations and any Good Management Practices (GMPs) that enhance the compliance case.
d. Record any administrative process preparation time in Envision Connect Daily Time and Activity **(DTA)** using Service Code 684.

2. Training Office staff will:
   a. Prepare the Intervention Training Conference Letter.
   b. Prepare Risk Control Plans as required.
   c. Prepare written tests for attendees.
   d. Record any administrative process preparation time in DTA using code 684.

B. Agenda for Intervention Training Conference:

1. Review contents of the Intervention Training Conference Letter.
2. Determine owner/PIC basic food safety knowledge.
3. Perform courtesy inspection.
4. Provide onsite training based on facility noncompliance issues.
5. Express concern for public health and provide and offer to review relevant food safety handouts and logs from the Food Establishment Resource Library (FERL).
6. Document the active managerial control actions the establishment has taken and plans to take to practice safe food handling and meet the standards of the Regulations.
7. Discuss enforcement actions, optional and required. Explain that this meeting is the first step in the Administrative Process and the goal of this intervention strategy is for the establishment to succeed in serving and selling safe food.

C. Enforcement Actions:

1. Require a CFPM onsite during all hours of operation. Within 15 days, the facility must have documentation of course registration available upon request for each PIC needed to cover all shifts. The facility must provide documentation to SNHD that the PIC(s) have successfully completed the course within one month of the CFPM registration deadline. Failure to have a CFPM onsite at the time of any inspection after the compliance deadline will result in a Violation #21 on the inspection report form. A repeat violation will result in a downgrade.
   a. If CFPM training is not available for the language needed within the above timeframe, additional time will be allowed based on the schedule for training.
   b. If CFPM training is not available in the native language of the PIC, additional time for the establishment to hire a PIC with the ability to obtain CFPM certification will be allowed, as well as, the option of a contractual agreement with a FSC.
2. Increase inspection frequency. An unannounced inspection will be conducted within two months of the CFPM compliance deadline.
   a. Unannounced inspections will take place every four months while the facility remains in the Administrative Process.
   b. Noncompliance requires a Supervisor Conference per EH Supervisor discretion.

3. Optional: Require facility staff to maintain relevant logs (cooling, cooking, refrigeration, etc.) for a specific amount of time (generally 60 days). PIC is to submit copies of the logs to the assigned EHS for the specified timeframe. Failure to have the required logs onsite at the time of any inspection after the compliance deadline is a Violation #23 on the inspection report.
4. Apply additional enforcement actions on a case-by-case basis with EH Supervisor approval.

D. Documentation:

1. Training Office:
   - **a.** Record any administrative process reporting time in the DTA using Service Code 684.
   - **b.** Document intervention training time on an observational inspection form using Service Code 681.
   - **c.** Use the Intervention Training Conference Letter as a template to memorialize the conference. Attach the signed letter in the DTA with the description, "Intervention Letter."
   - **d.** Attach the latest downgrade inspection photos in the DTA using the established naming convention per the EH Photo Policy.
   - **e.** Attach the Intervention Training photos in the DTA with the description "Intervention Photos."
   - **f.** Attach all risk control plans, compliance plans, etc. in the DTA. Fill in the description tab with details. Anything with a compliance timeline will be a 684 EC entry.
   - **g.** Add facility information to the Admin Process report. This report is maintained on the EH shared drive by EH Supervisors, the Food Operations EH Manager, and the EH Training Officers.
   - **h.** Email training highlights to facility EHS, EH Supervisor, and Senior EHS.
   - **i.** Follow-up on CFPM requirements and record in EC with the description "CFPM exp yyyy/mm/dd."
2. Facility EHS:
   - **a.** Record any administrative process reporting time in the DTA using Service Code 684.
   - **b.** Follow-up with required logs. Failure to have required logs at the time of any inspection after the compliance deadline is a Violation #23 on the inspection report.
     - **i.** If there are no issues with the submitted logs, make a monthly entry in the DTA documenting receipt of logs with no issues.
     - **ii.** If there are any issues, attach relevant logs with a description of the action taken.
3. All other SNHD attendees:
   - **a.** Enter the intervention training conference into the DTA using Service Code 681.

III. SUPERVISOR CONFERENCE:

A. Pre-Supervisor Conference:

1. Prepare the Supervisor Conference Letter.

2. Prepare downgrade inspection photos using the approved photo template.
3. Record any administrative process preparation time in the DTA using Service Code 684.

B. Agenda for Supervisor Conference:

1. Review contents of the Supervisor Conference Letter.
2. Express concern for public health and offer to provide and review relevant food safety handouts and logs from the FERL.
3. Document the active managerial control actions the establishment has taken and plans to take to practice safe food handling and meet the standards of the Regulations.
4. Discuss enforcement actions, optional and required. Explain the administrative process up to permit suspension, pending revocation and that this is the second step in the process. The continued goal is for the establishment to succeed in serving and selling safe food.

C. Enforcement Actions:

1. Continue the requirement of a CFPM during all hours of operation. Failure to have a CFPM onsite at the time of any inspection after the compliance deadline is a Violation #21 on the inspection report. A repeat violation will result in a downgrade.
2. Mandate a contractual agreement with a FSC until satisfactory compliance is demonstrated to SNHD. The facility must have proof of a signed contract within 15 days. The facility representative is responsible for scheduling a meeting at the establishment with their PIC staff, the FSC, the assigned EHS, and EH Supervisor and/or Senior EHS within one month of the FSC contract submission deadline. During the onsite meeting, compliance will be further assessed.
   a. If the PIC requests assistance obtaining a FSC, refer them to an internet search on environmental health consultant and/or food safety consultant.
   b. Failure to contract a FSC or schedule a meeting at the establishment within the prescribed timeframe is a Violation #1 on the inspection form for operating outside the parameters of the health permit(s).
3. Continue increased inspection frequency. An unannounced inspection will be conducted within two months of the FSC compliance deadline.
   a. Unannounced inspections will take place every four months while the facility remains in the administrative process.
   b. Noncompliance may require a Manager Conference, per EH Supervisor discretion.
4. Optional: Require maintenance of relevant logs (cooling, cooking, refrigeration, etc.) for a specific amount of time (generally 60 days). Have the PIC submit copies of the logs to the assigned EHS for the specified time. Failure to have required logs at the time of any inspection after the submission deadline is Violation #23 on the inspection report.
5. Optional: Require facility to provide formal food safety training for all food handlers. The facility must have documentation available upon request stating who provided the training and a list of food handlers that attended. Failure to have logs onsite at the time of any inspection after the compliance deadline will result in a Violation #23 on the inspection report.

6. Apply additional enforcement actions on a case-by-case basis with EH Supervisor approval.

D. Documentation:

1. Record any administrative process reporting time in the DTA using Service Code 684.
2. Supervisor or Senior will document Supervisor Conference time on an observational inspection form using Service Code 682.
3. All other attendees will document time in the DTA using Service Code 682.
4. Use Supervisor Conference Letter to memorialize the conference (attach Training Intervention Conference Letter). Attach the signed letter to the record in the DTA with the description: "Supervisor Letter."
5. Attach all risk control plans, compliance plans, etc. to the record in the DTA. Fill in description tab with details about the contents of the documents.
6. Using the approved photo template, attach the latest downgrade inspection photos to the Supervisor Conference record with the description: "Downgrade Photos."
7. Update facility information in the Admin Process report. This report is maintained on the EH shared drive by EH Supervisors, the Food Operations EH Manager, and the EH Training Officers.
8. Supervisor or Senior will document onsite meeting with the PIC and consultant on an observational report using Service Code 682.
9. All other attendees will document time in the DTA using Service Code 682.
10. Attach any onsite meeting photos to the Supervisor Conference record with a description: "Supervisor Photos."
11. Follow-up on CFPM requirements and document Service Code 682 on the Notice of Inspection and Survey (short form) or record the DTA. Description: "CFPM exp yyyy/mm/dd."
12. Follow-up with required logs. Failure to have required logs at the time of any inspection after the compliance deadline is a Violation #23 on the inspection report.
    a. If there are no issues with the submitted logs, make a monthly entry in EC documenting receipt of logs with no issues.
    b. If there are issues, attach relevant logs with a description of the action taken.

IV. MANAGER CONFERENCE:

A. Pre-Manager Conference:

1. Prepare the Manager Conference Letter.
2. Prepare downgrade inspection photos using approved photo template.
3. Record any administrative process preparation time in the DTA using Service Code 684.

B. Agenda for Manager Conference:

1. Review contents of the Manager Conference Letter.
2. Express concern for public health and offer to provide and review relevant food safety handouts and logs from the FERL.
3. Document what active managerial control actions the establishment has taken and plans to take to practice safe food handling and meet the standards of the Regulations.

4. Discuss enforcement actions, optional and required. Explain the administrative process up to permit revocation and that this is the third step in the process. If the facility receives a C grade or closure within 18 months of the Managerial Conference, the permit will be immediately suspended, pending revocation. Express that the continued goal is for the establishment to succeed in serving and selling safe food.

C. Enforcement Actions:

1. Continue the requirement of a CFPM during all hours of operation. Failure to have a CFPM onsite at the time of any inspection after the compliance deadline is a Violation #21 on the inspection report.
2. Maintain a contractual agreement with an FSC until satisfactory compliance is demonstrated to the SNHD.
   a. Failure to maintain a contract with an FSC is a Violation #1 on the inspection form for operating outside the parameters of the health permit.
3. Continue increased inspection frequency:
   a. Prior to any inspections post Managerial Conference, the EH Supervisor and/or Senior EHS must give a 48-hour notice to the EH Director, EH Manager, Legal Counsel, Administrative Secretary, and Administrative Assistant in the event of permit suspension, pending revocation.
   b. Inspections taking place after a Managerial Conference must have an EH Supervisor or Senior present with the EHS until the facility is removed from the administrative process.
   c. EHS must have a signed and dated Suspension Pending Revocation Letter, affidavit for these inspections, and a special closure letter in Terra Green Cardstock as outlined in the Permit Suspension Pending Revocation Workflow on the EH shared drive. The letter will be in English and, if applicable, the preferred language (excluding translation of regulatory references) of the permit holder.
   d. In the case of an Imminent Health Hazard complaint, the EH Supervisor and/or Senior EHS must email notice to the EH Director, EH Manager, Legal Counsel, Administrative Secretary, and Administrative Assistant in the event of permit suspension, pending revocation.
   e. Unannounced inspections will take place every four months while the facility remains in the administrative process.
      i. If the facility receives a C grade or closure within 18 months of the Managerial Conference, the permit will be immediately suspended, pending revocation.
      ii. In addition to documenting the demerit total and downgrade on the inspection report, if the permit is suspended, pending revocation, an additional observational report must be completed immediately afterwards to document the permit suspension using Result Code 88. All other permits in the establishment must also have an observational report completed or documented in DTA as suspended, pending revocation.
   f. Require formal food safety training for all food handlers as per Manager Conference Letter. The facility must have documentation available upon request stating who provided the training and a list of food handlers that attended.
   g. Apply additional enforcement actions on a case-by-case basis with EH Director approval.

D. Documentation:

1. Record any administrative process reporting time in the DTA using Service Code 684.
2. Supervisor or Senior will document Manager Conference time on an observational inspection form using Service Code 683.
3. All other attendees will document time in the DTA using Service Code 683.
4. Use the Manager Conference Letter as the template to memorialize the conference (attach Supervisor and Training Intervention letters). Attach the signed letter to the DTA record with the description "Manager Letter."
5. Attach all risk control plans, compliance plans, FSC contract, etc. in the DTA. Fill in description tab with details about the contents of the documents.
6. Attach the latest downgrade inspection photos using the approved photo template to the Manager Conference record with the description: "Downgrade Photos."
7. Update facility information in the Admin Process report. This report is maintained on the EH shared drive by EH Supervisors, the Food Operations EH Manager, and the EH Training Officers.

Attachment B

Page 1 of 1

PR# EHS: Name (IF MULTIPLE EHS, INCLUDE ALL) DATE: 00/00/00
FACILITY NAME, ADDRESS IN CAPS

Photo 1 of 15 (V5)

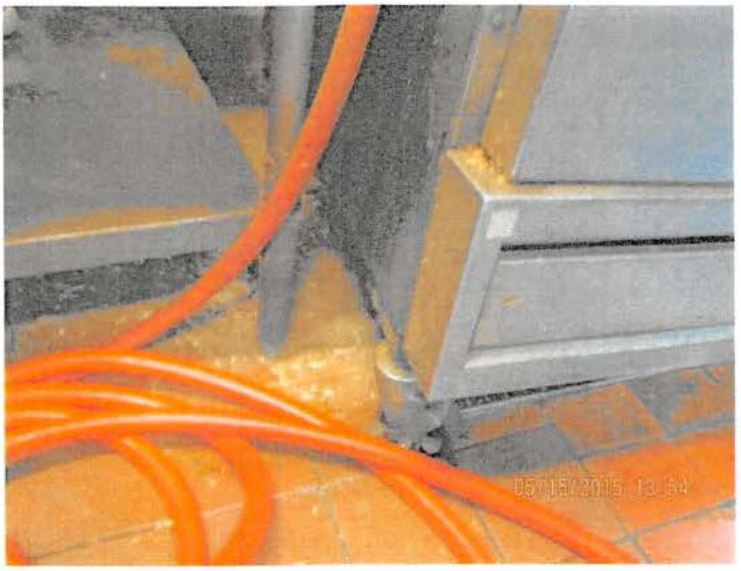


Photo 2 of 15 (V5)

Page 1 of 1

PR0006381 EHS: Jacob Billings DATE: 5/15/15
GANDHI INDIAS CUISINE, 4080 SOUTH PARADISE ROAD #9

Attachment C

Southern Nevada Health District

Intervention Training Conference

DATE

FACILITY NAME

ADDRESS

PR#S

Persons in Attendance			
Larry Navarrete	Training Officer	navarrete@snhd.org	702-759-0518

INTERPRETER SERVICES REQUESTED: Yes or No
Interpreter: N/A
Language: N/A

I. **File Review/Inspection History**

Inspection Summary:

PR# AND PERMIT NAME

Date	Demerits	Status

PR# AND PERMIT NAME

Date	Demerits	Status

Violations noted:

CRITICAL VIOLATIONS:

- Example: Handwashing (as required, when required, proper glove use, no bare hand contact of ready-to-eat foods)
  - *Employee rinsed gloves at hand sink instead of hand washing (3/4/2016)*

1

- *Employee put gloved fingers in mouth to taste food and continued working without hand washing (3/4/2016)*
- *Employees donning gloves without hand washing first (4/6/2015, 10/21/2015)*
- *Employee performed improper hand wash (4/6/2015, 10/21/2015)*

- Verifiable time as a control with approved procedure when in use. Operational plan, waiver, or variance approved and followed when required. Operating within the parameters of the health permit.
  - List
- Handwashing (as required, when required, proper glove use, no bare hand contact of ready-to-eat foods). Food handler health restrictions as required.
  - List
- Commercially manufactured food from approved source with required labels. Parasite destruction as required. Potentially hazardous foods/time temperature control for safety (PHF/TCS) received at proper temperature.
  - List
- Hot and cold running water from approved source as required.
  - List
- Imminently dangerous cross connection or backflow. Waste water and sewage disposed into public sewer or approved facility.
  - List
- Food wholesome; not spoiled, contaminated, or adulterated.
  - List
- PHF/TCSs cooked and reheated to proper temperatures.
  - List
- PHF/TCSs properly cooled.
  - List
- PHF/TCSs at proper temperatures during storage, display, service, transport, and holding.
  - List

MAJOR VIOLATIONS:

- Example: Food protected from potential contamination by employees and customers.
  - *Open employee food, drinks and personal items stored improperly (4/6/2015, 3/4/2016)*
  - *Employee observed eating during food prep (3/4/2016)*
- Food and warewashing equipment approved, properly designed, constructed, and installed.
  - list
- Food protected from potential contamination during storage and preparation.
  - List
- Food protected from potential contamination by chemicals. Toxic items properly labeled, stored, and used.
  - List
- Food protected from potential contamination by employees and consumers.
  - List
- Kitchenware and food contact surfaces of equipment properly washed, rinsed, sanitized, and air dried. Equipment for warewashing operated and maintained. Sanitizer solution provided and maintained as required.
  - List
- Handwashing facilities adequate in number, stocked, accessible, and limited to handwashing only.
  - List
- Effective pest control measures. Animals restricted as required.
  - List
- Hot and cold holding equipment present, properly designed, maintained, and operated.

2

- List
- Accurate thermometers (stem & hot/cold holding) provided and used.
  - List
- PHF/TCSs properly thawed. Fruits and vegetables washed prior to preparation or service.
  - List
- Single use items not reused or misused.
  - List
- Person in Charge (PIC) available and knowledgeable/management certification. Food handler card as required. Facility has an effective Employee Health Policy.
  - List
- Backflow prevention devices and methods in place and maintained.
  - List
- Grade card and required signs posted conspicuously. Consumer advisory as required. Records/logs maintained and available when required. Nevada Clean Indoor Air Act (NCIAA) compliant. PHFs labeled and dated as required. Food sold for offsite consumption labeled properly.
  - List

II. Plan to Maintain the Facility with Regards to Food Safety and Sanitation

During the conference, the following was discussed:

- Most recent inspection findings on Date and how they relate to foodborne illness (FBI) risk factors reviewed. Photographs of violations provided to owner for staff training.
- Necessary PIC knowledge reviewed.
- Handouts and training materials provided in English and language from the SNHD website: www.SouthernNevadaHealthDistrict.org/ferl
  - Reducing Foodborne Illness Risk Factors
  - Recalibration Instructions
  - Sanitizer Fact Sheet
  - Critical Temperatures
  - Cool Foods Quickly and Safely
  - Guidance on PIC Knowledge
  - Employee Health Policy
  - Time as a Public Health Control
  - Wash Your Hands!
  - Cooling Down Foods-Tracking Chart
  - Manual Warewashing
  - Refrigerated Storage
  - Do's and Don'ts
  - FSP Invitation
  - Certified Food Protection Manager (CFPM) Handout
  - Cold Holding Log
  - Hot Holding Log
  - Consumer Advisory Wording
  - No Smoking Sign
  - Alcohol Warning Sign
- Corrective action taken by operator as of Date:
  - LIST as applicable
- Issues observed during training survey:
  - LIST as applicable
- Risk control plan for:

3

- LIST as applicable

SNHD staff cannot allow you to operate your establishment under conditions which jeopardize public health. To aid you in controlling the FBI risk factors at your facility, SNHD will require the following:

- Per 8-205.11 of the *SNHD 2010 Regulations Governing the Sanitation of Food Establishments* (hereafter *Regulations*), **it will be required that the operator have each PIC register for a CFPM training program by 15 DAYS DATE and complete the certification process by 30 DAYS DATE.** A PIC who has completed an American National Standards Institute (ANSI) accredited, CFPM training program must be present and responsible at **facility** at all times. The designated PIC staff must be knowledgeable of all food safety measures associated with the operation and be actively supervising to ensure the food handling staff performs duties in compliance with the *Regulations*. Proof of having passed the proctored examination must be submitted to the Health Authority and be available for review at the facility. A schedule that verifies a CFPM is onsite during all operating hours may be requested. Failure to comply will result in a #21 Violation (3 points) on your inspection report.
- It is the responsibility of **facility** ownership and their designated PIC(s) to prevent the occurrence of violations and maintain proper operation of the facility by consistently following the *Regulations*. All food handling staff must be trained in food safety as it relates to their assigned duties (2-104.11-L), including measures to be taken to prevent reoccurrence of any critical and major violations. If **facility** is unable to properly train staff on their own, the Health Authority may require contracting with a food safety consultant (FSC) per 8-101.11(A) of the *Regulations*.
- Per NRS 446.890, a permit holder must allow representatives of the Health Authority access to the Food Establishment.
- Per NRS 199.300, it is unlawful for any person to directly or indirectly intimidate a public officer.
- **Facility** shall actively monitor:
  - LIST as applicable
  - All food products during cooling
  - Temperature logs
  - Training logs
  - Logs are to be submitted to EHS at email for review on a weekly basis for the next ### days.

III. Pending Actions

- **Facility** is currently on a B downgrade, C downgrade, or Closure. A reinspection is to be scheduled once all violations on the Date inspection report have been corrected and the assessed fee of $$$ has been paid. The fee must be paid no later than Date. Corrections must be made so that the facility is ready for reinspection by Date. Facility must be able to pass an inspection with ten (10) demerits or less with no repeat critical or major violations. A failed inspection shall result in a further downgrade or closure as applicable and an associated fee assessment.
- **Facility** will be on an increased frequency of inspections until it is ensured that active managerial control of FBI risk factors is achieved as indicated by passing unannounced inspections.
- In order for facility to be successful in passing subsequent inspections, measures to provide for ongoing safe food practices/procedures to prevent the reoccurrence of FBI risk factors must be put in place. Training provided by facility will include:
  LIST SPECIFIC TO VIOLATIONS
  - Staff training on proper handwashing and no bare hand contact with ready-to-eat food.
  - Staff training on food safety as it applies to their food handling responsibilities.
  - Active monitoring of foods requiring time/temperature control for safety.
  - Proper storage of food products.
  - Proper employee practices to prevent contamination of consumer food and food contact surfaces.
  - Proper cleaning, sanitizing, and storage of food contact surfaces.
  - Proper labeling of ready-to-eat food requiring time/temperature control for safety.

- Monitoring of refrigeration temperatures to assure safe storage of food.

<Indicate any resources provided or sections of regulations cited>

Multiple B downgrades, a subsequent C downgrade, or closure after reestablishment of an A grade in the next 18 months may result in further administrative action.

I have reviewed and understand the items addressed above. I also understand that failure to maintain **facility** in compliance with the *SNHD 2010 Regulations Governing the Sanitation of Food Establishments* shall lead to a further enforcement action, up to and including the possible suspension, pending revocation, of my health permit to operate.

Signature: Owner / Responsible Person	**Print:** Owner / Responsible Person
Signature: Interpreted in language by	**Print** Interpreted in language by

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Attachment D

Southern Nevada Health District

Food Supervisor Conference

DATE

FACILITY NAME

ADDRESS

PR#s

Persons in Attendance			
Names	EH Supervisor	@snhd.org	702-759-1110
	Senior EHS	@snhd.org	
	EH Training Officer	@snhd.org	
	EHS	@snhd.org	
	Facility Owner		

INTERPRETER SERVICES REQUESTED: Yes or No
Interpreter: N/A
Language: N/A

The purpose of this document is to summarize a Supervisor Conference regarding the ongoing noncompliance with the *SNHD 2010 Regulations Governing the Sanitation of Food Establishments* (hereafter *Regulations*).

The items discussed and subsequent actions are as follows:

I. **File Review/Inspection History**

An Intervention Training conference was held with the operators of Facility on Date. At that time, the history of critical and major food safety violations was reviewed. The importance of gaining and maintaining active managerial control of the food safety risk factors that could lead to foodborne illness (FBI) was impressed, as well as, the consequences associated with ongoing noncompliance including possible suspension, pending revocation, of the health permit(s) to operate. A copy of the conference agenda is attached.

Subsequent to the Intervention Training conference, the following inspections have taken place:

PR# AND PERMIT NAME

Date	Demerits	Status

PR# AND PERMIT NAME

Date	Demerits	Status

1

Violations Noted:

CRITICAL VIOLATIONS:

- Example: Handwashing (as required, when required, proper glove use, no bare hand contact of ready-to-eat foods)
  - *Employee rinsed gloves at hand sink instead of hand washing (3/4/2016)*
  - *Employee put gloved fingers in mouth to taste food and continued working without hand washing (3/4/2016)*
  - *Employees donning gloves without hand washing first (4/6/2015, 10/21/2015)*
  - *Employee performed improper hand wash (4/6/2015, 10/21/2015)*
- Verifiable time as a control with approved procedure when in use. Operational plan, waiver, or variance approved and followed when required. Operating within the parameters of the health permit.
  - List
- Handwashing (as required, when required, proper glove use, no bare hand contact of ready-to-eat foods). Food handler health restrictions as required.
  - List
- Commercially manufactured food from approved source with required labels. Parasite destruction as required. Potentially hazardous foods/time temperature control for safety (PHF/TCS) received at proper temperature.
  - List
- Hot and cold running water from approved source as required.
  - List
- Imminently dangerous cross connection or backflow. Waste water and sewage disposed into public sewer or approved facility.
  - List
- Food wholesome; not spoiled, contaminated, or adulterated.
  - List
- PHF/TCSs cooked and reheated to proper temperatures.
  - List
- PHF/TCSs properly cooled.
  - List
- PHF/TCSs at proper temperatures during storage, display, service, transport, and holding.
  - List

MAJOR VIOLATIONS:

- Example: Food protected from potential contamination by employees and customers.
  - *Open employee food, drinks and personal items stored improperly (4/6/2015, 3/4/2016)*
  - *Employee observed eating during food prep (3/4/2016)*
- Food and warewashing equipment approved, properly designed, constructed, and installed.
  - list
- Food protected from potential contamination during storage and preparation.
  - List
- Food protected from potential contamination by chemicals. Toxic items properly labeled, stored, and used.
  - List

- Food protected from potential contamination by employees and consumers.
  - List
- Kitchenware and food contact surfaces of equipment properly washed, rinsed, sanitized, and air dried. Equipment for warewashing operated and maintained. Sanitizer solution provided and maintained as required.
  - List
- Handwashing facilities adequate in number, stocked, accessible, and limited to handwashing only.
  - List
- Effective pest control measures. Animals restricted as required.
  - List
- Hot and cold holding equipment present, properly designed, maintained, and operated.
  - List
- Accurate thermometers (stem & hot/cold holding) provided and used.
  - List
- PHF/TCSs properly thawed. Fruits and vegetables washed prior to preparation or service.
  - List
- Single use items not reused or misused.
  - List
- Person in Charge (PIC) available and knowledgeable/management certification. Food handler card as required. Facility has an effective Employee Health Policy.
  - List
- Backflow prevention devices and methods in place and maintained.
  - List
- Grade card and required signs posted conspicuously. Consumer advisory as required. Records/logs maintained and available when required. Nevada Clean Indoor Air Act (NCIAA) compliant. PHFs labeled and dated as required. Food sold for offsite consumption labeled properly.
  - List

II. Plan to Maintain the Facility with Regards to Food Safety and Sanitation

- Most recent inspection findings on Date and how they relate to FBI risk factors reviewed.
- Photographs of violations provided to owner for staff training.
- Necessary PIC knowledge reviewed.
- Handouts and training materials provided from the SNHD website: www.SouthernNevadaHealthDistrict.org/ferl
  - LIST Specify Language(s) Provided as Applicable
  - Reducing Foodborne Illness Risk Factors
  - Recalibration Instructions
  - Sanitizer Fact Sheet
  - Critical Temperatures
  - Cool Foods Quickly and Safely
  - Guidance on PIC Knowledge
  - Employee Health Policy
  - Time as a Public Health Control
  - Wash Your Hands!
  - Cooling Down Foods-Tracking Chart
  - Manual Warewashing
  - Refrigerated Storage
  - Do's and Don'ts

3

- FSP Invitation
- Certified Food Protection Manager (CFPM) Handout
- Cold Holding Log
- Hot Holding Log
- Consumer Advisory Wording
- No Smoking Sign
- Alcohol Warning Sign

- Corrective action taken by operator as of Date:
  - LIST as Applicable

This is the second conference held for **Facility**. SNHD staff cannot allow you to operate your establishment under conditions which jeopardize public health. To aid you in controlling the risk factors at your facility, staff will require the following:

- If not already in place, provide proof of CFPM certification for each PIC to the Health Authority within 15 days. Per the *Regulations*, a PIC who has completed an American National Standards Institute (ANSI) accredited, CFPM training program must be present and responsible at **Facility** at all times. The designated PIC staff must be knowledgeable of all food safety measures associated with the operation and be actively supervising to ensure the food handling staff performs duties in compliance with the *Regulations*.
- Facility management has been unable to ensure a safe food operation. Section 8-101.11 (A) of the *Regulations* allows the Health Authority to impose specific requirements in addition to the requirements specified in the *Regulations* to protect public health. As such, it shall be required that **the Facility provide proof of a contractual agreement with a Food Safety Consultant (FSC) to this office within 15 DAYS.** The consultant must be able to assist the Facility to ensure active managerial control of risk factors for foodborne illness. This may include Standard Operating Procedures, employee training, and methods to verify ongoing safe food handling practices by **Facility** management. **Facility is responsible for scheduling a meeting at the establishment with their PIC staff, the FSC, and the Health Authority within 30 DAYS. Compliance shall be further assessed at this time.**
- All food handling staff must be trained in food safety as it relates to their assigned duties (2-104.11-L), including measures to be taken to prevent reoccurrence of any critical and major violations. It is the responsibility of **Facility** ownership and their designated PIC(s) to prevent the occurrence of violations and maintain proper operation of the Facility by consistently following the *Regulations*.
- Per NRS 446.890, a permit holder must allow representatives of the Health Authority access to the Food Establishment.
- Per NRS 199.300, it is unlawful for any person to directly or indirectly intimidate a public officer.
- **Facility** shall actively monitor:
  - LIST as applicable
  - All food products during cooling
  - Temperature logs.
  - Logs are to be submitted to EHS at email for review on a weekly basis for the next ### days.
- **Facility** will be on an increased frequency of inspection until it is ensured that active managerial control of FBI Risk Factors is achieved as indicated by passing unannounced inspections.

III. **Pending Actions**

- **Facility** is currently on a B downgrade, C downgrade, or Closure. A reinspection is to be scheduled once all violations on the Date inspection report have been corrected and the assessed fee of $$$ has been paid. The

fee must be paid no later than Date. Corrections must be made so that **Facility** is ready for reinspection by Date. **Facility** must be able to pass an inspection with ten (10) demerits or less with no repeat critical or major violations. A failed inspection shall result in a further downgrade or closure as applicable and an associated fee assessment. A closure stands until the facility has worked with the contracted FSC to put procedures in place for long term active managerial control of risk factors for foodborne illness and has passed a reinspection.

- In order for Facility to be successful in passing subsequent inspections, measures to provide for ongoing safe food practices and procedures to prevent the reoccurrence of risk factors for FBI must be put in place. These include:
  LIST SPECIFIC TO VIOLATIONS<Indicate any resources provided or sections of regulations cited>
  - Staff training on proper handwashing and no bare hand contact with ready-to-eat food.
  - Staff training on food safety as applicable to their food handling responsibilities.
  - Active monitoring of food requiring time/temperature control for safety.
  - Proper storage of food products.
  - Proper employee practices to prevent contamination of consumer food and food contact surfaces.
  - Proper cleaning, sanitizing, and storage of food contact surfaces.
  - Proper labeling of ready-to-eat food requiring time/temperature control for safety.
  - Monitoring of refrigeration temperatures to assure safe storage of food.

Multiple B downgrades, a subsequent C downgrade, or closure after reestablishment of an A grade in the next 18 months may result in further administrative action.

I have reviewed and understand the items addressed above. I also understand that failure to maintain **Facility** in compliance with the *SNHD 2010 Regulations Governing the Sanitation of Food Establishments* shall lead to a further enforcement action, up to and including the possible suspension, pending revocation, of my health permit(s) to operate.

Signature: Owner / Responsible Person	**Print:** Owner / Responsible Person
Signature: Interpreted in language by	**Print** Interpreted in language by

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Attachment E

Southern Nevada Health District

Manager Conference

DATE

FACILITY NAME

ADDRESS

PR#S

Persons in Attendance			
Names	EH Manager	@snhd.org	702-759-1110
	EH Supervisor	@snhd.org	
	EH Training Officer	@snhd.org	
	EHS	@snhd.org	
	Facility Owner		

INTERPRETER SERVICES REQUESTED: Yes or No
Interpreter: N/A
Language: N/A

The purpose of this document is to summarize a Manager Conference regarding the ongoing noncompliance with the *SNHD 2010 Regulations Governing the Sanitation of Food Establishments* (hereafter *Regulations*).

The items discussed and subsequent actions are as follows:

I. **File Review/Inspection History**

An Intervention Training Conference and a Food Supervisory Conference have been held with Facility on DATE and on DATE, respectively. If circumstances differ provide explanation. At that time, the history of critical and major food safety violations was reviewed. The importance of gaining and maintaining active managerial control of the food safety risk factors that could lead to foodborne illness (FBI) was impressed, as well as, the consequences associated with ongoing noncompliance, including possible suspension, pending revocation of the health permit(s) to operate. Copies of agendas are attached.

Subsequent to the Supervisor conference, the following inspections have taken place:

PR# AND PERMIT NAME

Date	Demerits	Status

1

PR# AND PERMIT NAME

Date	Demerits	Status

Violations noted:

CRITICAL VIOLATIONS:

- Example: Handwashing (as required, when required, proper glove use, no bare hand contact of ready-to-eat foods)
  Employee rinsed gloves at hand sink instead of hand washing (3/4/2016)
- Verifiable time as a control with approved procedure when in use. Operational plan, waiver, or variance approved and followed when required. Operating within the parameters of the health permit.
  - List
- Handwashing (as required, when required, proper glove use, no bare hand contact of ready-to-eat foods). Food handler health restrictions as required.
  - List
- Commercially manufactured food from approved source with required labels. Parasite destruction as required. Potentially hazardous foods/time temperature control for safety (PHF/TCS) received at proper temperature.
  - List
- Hot and cold running water from approved source as required.
  - List
- Imminently dangerous cross connection or backflow. Waste water and sewage disposed into public sewer or approved Facility.
  - List
- Food wholesome; not spoiled, contaminated, or adulterated.
  - List
- PHF/TCSs cooked and reheated to proper temperatures.
  - List
- PHF/TCSs properly cooled.
  - List
- PHF/TCSs at proper temperatures during storage, display, service, transport, and holding.
  - List

MAJOR VIOLATIONS:

- Example: Food protected from potential contamination by employees and customers.
  Employee observed eating during food prep (3/4/2016)
- Food and warewashing equipment approved, properly designed, constructed, and installed.
  - list

2

- Food protected from potential contamination during storage and preparation.
  - List
- Food protected from potential contamination by chemicals. Toxic items properly labeled, stored, and used.
  - List
- Food protected from potential contamination by employees and consumers.
  - List
- Kitchenware and food contact surfaces of equipment properly washed, rinsed, sanitized, and air dried. Equipment for warewashing operated and maintained. Sanitizer solution provided and maintained as required.
  - List
- Handwashing facilities adequate in number, stocked, accessible, and limited to handwashing only.
  - List
- Effective pest control measures. Animals restricted as required.
  - List
- Hot and cold holding equipment present; properly designed, maintained, and operated.
  - List
- Accurate thermometers (stem & hot/cold holding) provided and used.
  - List
- PHF/TCSs properly thawed. Fruits and vegetables washed prior to preparation or service.
  - List
- Single use items not reused or misused.
  - List
- Person in Charge (PIC) available and knowledgeable/management certification. Food handler card as required. Facility has an effective Employee Health Policy.
  - List
- Backflow prevention devices and methods in place and maintained.
  - List
- Grade card and required signs posted conspicuously. Consumer advisory as required. Records/logs maintained and available when required. Nevada Clean Indoor Air Act (NCIAA) compliant. PHFs labeled and dated as required. Food sold for offsite consumption labeled properly.
  - List

II. Plan to Maintain the Facility with Regards to Food Safety and Sanitation

- Most recent inspection findings on Date and how they relate to FBI risk factors reviewed.
- Photographs of violations provided to owner for staff training.
- Necessary PIC knowledge reviewed.
- Handouts and training materials provided in English and language from the SNHD website: www.SouthernNevadaHealthDistrict.org/ferl
  - LIST Specify Language(s) Provided as Applicable
  - Reducing Foodborne Illness Risk Factors
  - Recalibration Instructions
  - Sanitizer Fact Sheet
  - Critical Temperatures

3

- Cool Foods Quickly and Safely
- Guidance on PIC Knowledge
- Employee Health Policy
- Time as a Public Health Control
- Wash Your Hands!
- Cooling Down Foods-Tracking Chart
- Manual Warewashing
- Refrigerated Storage
- Do's and Don'ts
- FSP Invitation
- Certified Food Protection Manager (CFPM) Handout
- Cold Holding Log
- Hot Holding Log
- Consumer Advisory Wording
- No Smoking Sign
- Alcohol Warning Sign

- Corrective action taken by operator as of Date:
  - LIST as Applicable

This is the third conference held for **Facility.** SNHD staff cannot allow **Facility** to operate under conditions which jeopardize public health. As conditions of the previous conferences, **Facility** has been required to do the following:

- Provide a responsible PIC who has completed an American National Standards Institute (ANSI) accredited, CFPM training program at **Facility** at all times. The designated PIC staff must be knowledgeable of all food safety measures associated with the operation and be actively supervising to ensure the food handling staff performs duties in compliance with the *Regulations*.
- Provide a contract with a Food Safety Consultant (FSC) to put measures in place to ensure active managerial control of the risk factors for foodborne illness. This may have included Standard Operating Procedures (SOPs), employee training, and methods to verify ongoing safe food handling practices by **Facility** management.
- **Facility** shall actively monitor:
  - LIST as applicable
  - All food products during cooling
  - Temperature logs
  - Training logs
  - Logs are to be submitted to EHS at email for review on a weekly basis for the next ### days.
- Add any other requirements

Be advised that these conditions remain as requirements for the permit.

III. Pending Actions

Facility has failed to stay in compliance with safe food practices as observed in the most recent inspection on DATE. As such, **Facility** will be required to do the following:

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- Provide proof of a current contractual agreement with a FSC within 15 days.
  - **Facility** is responsible for scheduling a meeting at the establishment with their PIC staff, the FSC, and the Health Authority within 30 DAYS. Compliance shall be further assessed at this time. Failure to comply will result in a #1 Violation (5 points) on the inspection report.
- Provide formal food safety training pertinent to the duties performed by all food handlers.
  - Training must be provided within 30 days. Records must be maintained onsite stating the training focus, who provided the training, and a list of the food handlers that attended. Failure to comply will result in a #23 Violation (3 points) on the inspection report.
  - Training is to include:
    - List Specific Topics
    - Staff training on proper handwashing and no bare hand contact with ready-to-eat food.
    - Staff training on food safety as it applies to their food handling responsibilities.
    - Active monitoring of food requiring time/temperature control for safety.
    - Proper storage of food products.
    - Proper employee practices to prevent contamination of consumer food and food contact surfaces.
    - Proper cleaning, sanitizing, and storage of food contact surfaces.
    - Proper labeling of ready-to-eat foods that require time/temperature control for safety.
    - Monitoring of refrigeration temperatures to assure safe storage of food.
- Provide proof of PIC(s) CFPM certification and scheduled hours to the Health Authority within 30 days. A PIC with CFPM certification must be on duty during all hours of operation. Failure to comply will result in a #21 Violation (3 points) on the inspection report.
- **Facility** will be on an increased frequency of inspections for 18 months until it is ensured that active managerial control of FBI risk factors is achieved as indicated by passing unannounced inspections.
- **Facility** is currently on a C grade or Closure. A reinspection is to be scheduled once all violations on the Date inspection report have been corrected and the assessed fee of $$$ has been paid. Corrections must be made so that **Facility** is ready for reinspection by Date. **Facility** must be able to pass an inspection with ten (10) demerits or less with no repeat critical or major violations. **A failed inspection shall result in a closure and an associated fee assessment. Noncompliance may result in permit suspension, pending revocation, at the discretion of the EH Food Operations Manager or EH Director.**

Multiple B downgrades, a subsequent C downgrade, or closure after reestablishment of an A grade in the next 18 months may result in an immediate suspension of the permit to operate (8-306.11) pending revocation of the permit.

I have reviewed and understand the items addressed above. I also understand that failure to maintain **Facility** in compliance with the *SNHD 2010 Regulations Governing the Sanitation of Food Establishments*

5

shall lead to suspension, pending revocation, of the health permit(s) to operate.

Signature: Owner / Responsible Person	**Print:** Owner / Responsible Person
Signature: Interpreted in language by	**Print** Interpreted in language by

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Southern Nevada Health District

FOOD HANDLER TRAINING BOOK

LEARN ABOUT FOODBORNE ILLNESS RISK FACTORS AND FOOD HAZARDS

INTRODUCTION

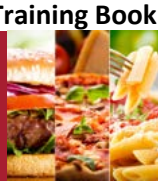


TABLE OF CONTENTS

This book was prepared by the Southern Nevada Health District Environmental Health Division as an educational tool. For more information on taking the test to receive your Food Handler Safety Training Card, visit www.snhd.info.

INTRODUCTION

ABOUT THIS BOOK

The Southern Nevada Health District's food regulations focus on the control of foodborne illness risk factors in food establishments. Control of the five risk factors will help prevent foodborne illness. The Person in Charge of a restuarant must be knowledgeable about the risk factors in order to train food handlers and ensure food safety practices are followed. This information is enhanced through continuous training with emphasis on preventing foodborne illness. If there is a risk to food safety, such as loss of water, sewage backup, or pest infestation, then the food establishment should self-close and contact the Health District.

FOODBORNE ILLNESS RISK FACTORS

Poor Personal Hygiene
- Improper hand washing
- Bare hand contact with ready-to-eat (RTE) foods
- Food handlers working while ill with the following symptoms: vomiting, diarrhea, sore throat with a fever, infected cuts on the hands, and jaundice

Food From Unsafe Sources
- Food from an unapproved source and/or prepared in unpermitted locations
- Receiving adulterated food

Improper Cooking Temperatures/Methods
- Cooking
- Reheating
- Freezing (kill step to eliminate parasites in fish)

Improper Holding, Time and Temperature
- Improper hot and cold holding of TCS foods
- Improper use of time as a control
- Improper cooling of TCS foods

Food Contamination
- Use of contaminated/improperly constructed equipment
- Poor employee practices
- Improper food storage/preparation
- Exposure to chemicals

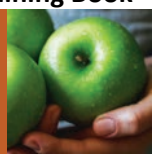
FOOD HAZARDS

Biological
- Microorganisms that can cause foodborne illness
- Bacteria, viruses, parasites, and fungi

Chemical
- Chemicals not meant to be consumed
- Sanitizers, cleaning agents, or pest control products must be separated from food

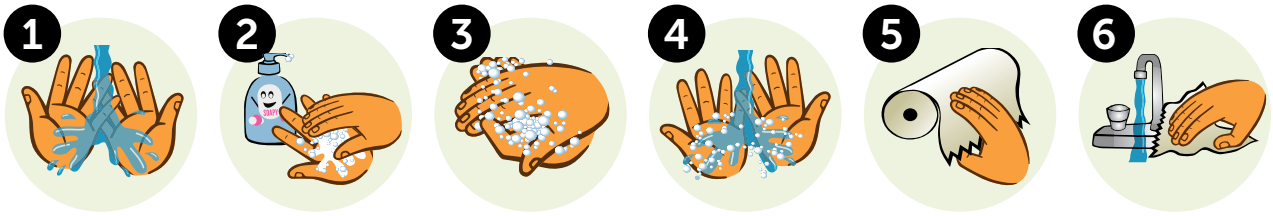
Physical
- Foreign objects that can cause injury
- Glass, metal, or bone

PERSONAL HYGIENE



PROPER HANDWASHING TECHNIQUE

Handwashing is a critical part of personal hygiene. It is important to **wash your hands in a designated handwashing sink** before food handling to prevent foodborne illness. The hand sink is for hand washing ONLY and should have liquid soap, paper towels, and a trash can.



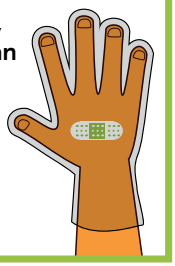
1. **WET HANDS** with warm water (min. 100°F)
2. **SOAP**
3. **RUB VIGOROUSLY** for 15 seconds
4. **RINSE**
5. **DRY**
6. **TURN OFF WATER** with paper towel

WASH YOUR HANDS...

- ✓ When entering the kitchen
- ✓ After touching your face, hair, or skin
- ✓ After using the restroom
- ✓ After handling raw animal products
- ✓ After taking out the trash or cleaning
- ✓ After handling ANYTHING dirty

If you have a cut on your hand, wash your hands, put on a clean bandage, and wear gloves.

If you can't wash your hands because of a wound, splint, bandage, or brace, you cannot work with food.



NO BARE HAND CONTACT WITH READY-TO-EAT FOODS

Ready-to-eat foods cannot be handled with bare hands. **Use a physical barrier to prevent contamination from germs that have the potential to cause foodborne illness.** These germs cannot be fully removed by proper handwashing alone.

Ready-to-eat foods include cooked food, raw fruits and vegetables, baked goods, snack foods, and ice. Physical barriers include deli/wax paper, gloves, and utensils such as tongs, scoops, and spatulas.

PERSONAL HYGIENE

UNIFORMS

- ✓ Proper hair restraint
- ✓ Neat and clean clothes
- ✓ All wounds covered
- ✓ No wrist jewelry
- ✓ Plain band ring
- ✓ Short and clean nails

- ✗ Hair coming outside the cap
- ✗ Dirty clothes
- ✗ Open and bleeding wounds
- ✗ Wrist jewelry
- ✗ Ornate or jeweled ring
- ✗ Long, painted, and/or artificial nails

EMPLOYEE HEALTH POLICY

Personal hygiene starts at home when you get ready for work each day. All of us carry disease-causing germs that can cause illness. **As a food handler, you are responsible for taking care of your health** to prevent foodborne illness. Tell your employer if you have been diagnosed with *Salmonella*, *Shigella*, *E. coli* O157:H7, Hepatitis A, or Norovirus or if you have any of the following symptoms:

VOMITING

DIARRHEA

SORE THROAT WITH A FEVER

INFECTED CUTS OR WOUNDS
on hands and arms

JAUNDICE

AN EASY WAY TO REMEMBER THE BIG 5 FOODBORNE ILLNESSES

SEND	Salmonella
SICK	Shigella
EMPLOYEES	E. coli
HOME	Hepatitis A
NOW	Norovirus

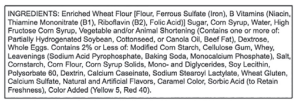
YOU CANNOT WORK AGAIN UNTIL SYMPTOM-FREE FOR 24 HOURS WITHOUT THE USE OF MEDICINE.

APPROVED SOURCES

■ FOOD FROM AN UNAPPROVED AND/OR UNPERMITTED SOURCE

First things first.... Once you have accepted food deliveries, **you cannot make unsafe food safe once again**. Time/temperature control for safety (TCS) foods, also known as potentially hazardous foods (PHF), require time and temperature control to limit pathogenic microorganism growth or toxin formation.

An **approved source is a reputable supplier** that has been inspected and follows regulations. You should always check food before you accept it from the supplier. During receiving you should check foods for:

Temperatures for receiving TCS food	**Overall Wholesomeness**	**Frozen Foods**
135°F — *Hot foods hot (above 135°F)* DANGER ZONE! — *Between 41°F and 135°F* 45°F — *It is acceptable to receive eggs, milk, and live shellstock at 45°F* 41°F (OR BELOW) — *Cold foods cold (below 41°F) Frozen foods should be frozen solid*	 *Reject cans that are dented, swollen, or leaking.*	 *Reject frozen foods that have ice crystals or liquids in the packages.*
Spoilage	**Expiration Dates**	**Signs of Contamination from Pests or Spills**
 *Food should NOT be slimy, sticky, off-color, or have a bad odor.*	 *Food should be within the use-by date marked from the manufacturer.*	 *Packages should be clean, dry, and intact*
Proper Labeling and Invoices	**Shellstock Tags**	**Parasite Destruction for Some Fish**
 *Food must be identified as to what it is and where it came from.*	 *Shellfish tags must be kept on file for 90 days.*	 *Fish served undercooked or raw must have documents from the supplier explaining how the fish is frozen or raised.*

REJECT FOOD IF IT DOES NOT MEET STANDARDS RATHER THAN ACCEPTING IT FROM THE SUPPLIER.

EXERCISE ACCEPT OR REJECT?

Coleslaw mix packaged in good condition at 45°F ⊘

Clean and unbroken raw shell eggs at 45°F ✓

Fish with sunken and cloudy eyes ⊘

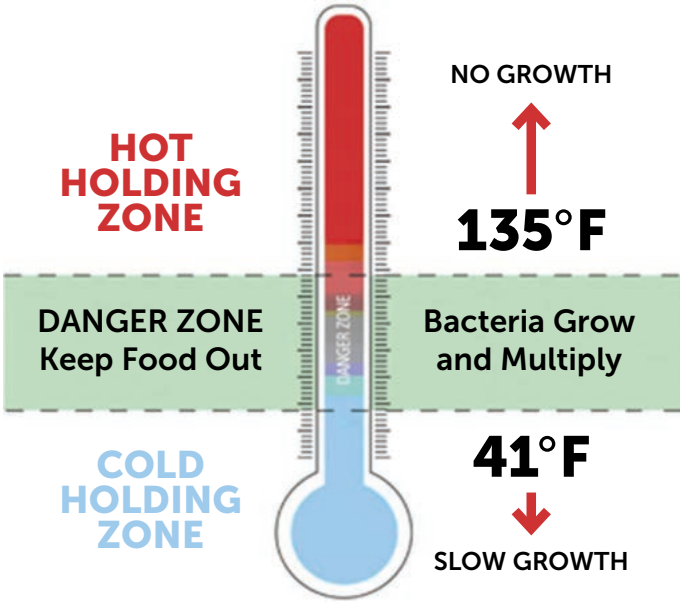
Cheddar cheese with small mold spots ⊘

Fresh beef that springs back to the touch ✓

PROPER TEMPERATURES

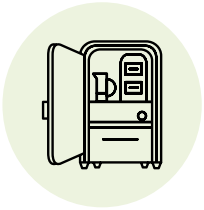
HOLDING TEMPERATURES

Although cooking foods is the only way to reduce the number of germs to safe levels, **you must store TCS foods at correct temperatures for safety**. It is important that foods requiring time and temperature control for safety (TCS) stay out of the temperature danger zone where bacteria grow the fastest. Keep hot foods hot and cold foods cold! When using time as a public health control, TCS foods held at room temperature should be held for a limited amount of time and then discarded.



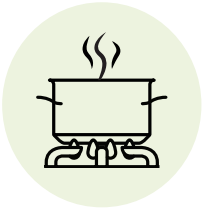
PROPER THAWING

It is important to **maintain foods 41°F or below when thawing (defrosting)**. Use an approved thawing method:



UNDER REFRIGERATION

Plan ahead — large items may take several days to thaw. Maintain refrigeration at 41°F or less.



AS PART OF COOKING

Take directly from frozen to cooking. This is great for foods that are small.

IN MICROWAVE

(TO BE IMMEDIATELY COOKED)

Transfer immediately to a conventional cooking process or cook completely in the microwave.

FULLY SUBMERGED UNDER COLD RUNNING WATER

Ensure running water flows fast enough to remove and float off loose particles. Ensure all portions of food are fully submerged under water. Running water should be cold; food should not rise above 41°F.

PROPER TEMPERATURES

COOKING

Cooking TCS foods to their required temperatures is the only way to reduce the amount of germs to safe levels. Use a calibrated and sanitized stem thermometer to check food temperatures. Insert the thermometer into the thickest part of the food away from bones to be sure all parts of the food are cooked thoroughly. Use proper equipment to cook and reheat foods. Do not cook foods in equipment that is intended only for hot holding.

(Note: Minimum cooking temperatures are held for 15 seconds.)

- Reheat of TCS foods made in house for hot holding within two hours
- Poultry: chicken, duck, turkey
- Stuffed Foods

- Tenderized/injected and ground meats
- Raw shell eggs for hot holding

- Whole muscle meat*
- Fish and seafood
- Raw shell eggs for immediate service

- Fruits, vegetables, and grains cooked for hot holding
- Reheat of manufactured TCS foods within two hours
- Hot holding

- **BETWEEN 41°F and 135°F**

- Cold holding
- Frozen food must be maintained frozen solid

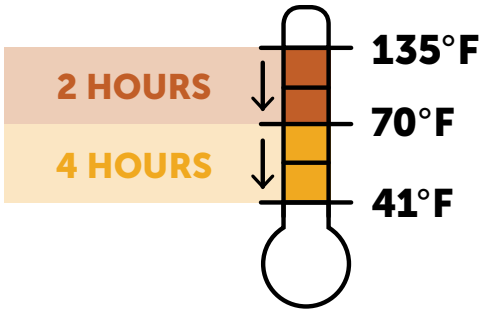
** Roasts can be cooked to 130°F for 112 minutes or per roast cook chart.*

RAW TCS FOODS CAN ONLY BE UNDER-COOKED IF THE CUSTOMER ORDERS IT THAT WAY AND THERE IS A CONSUMER ADVISORY ON THE MENU.

PROPER TEMPERATURES

COOLING METHODS

A two-stage cooling process is required for hot TCS foods: 135°F to 70°F in two hours and 70°F to 41°F in next four hours (not to exceed six hours total). **Cooling foods quickly and safely is important to ensure foods spend a minimum amount of time in the temperature danger zone.** Use a method that will speed up the cooling process, such as using an ice bath or dividing hot foods into shallow pans and then placing them into a refrigerator. Stir food regularly to allow heat to escape.



Date	Food	Start Time & Temp	At 1 Hour	At 2 Hours	135°F to 70°F in 2 hours?	At 3 Hours	At 4 Hours	At 5 Hours	At 6 Hours	70°F to 41°F in 4 hours?
3-20	SOUP	9AM 135°F	10AM 120°F	11AM 80°F		12PM 65°F	1PM 40°F			
6-27	RICE	3PM 135°F	4PM 90°F	5PM 68°F		6PM 55°F	7PM 50°F	8PM 45°F	9PM 39°F	

Soup should have been reheated to 165°F before two hours. The soup must be discarded.

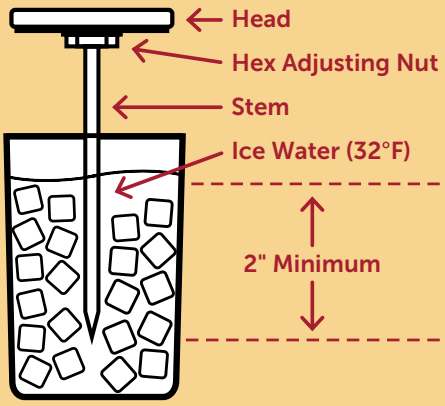
The rice met the 70°F and then the 41°F requirement within the six-hour cooling process.

THERMOMETER CALIBRATION

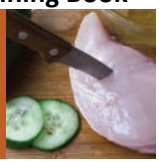
A **thermometer** is the most important tool you have to ensure food safety. It is important to calibrate your thermometer before checking the internal temperatures of food. Calibrate each thermometer regularly, as well as when it is new, and any time the thermometer is dropped. Use the appropriate thermometer for the food being measured.

STEPS FOR PROPER CALIBRATION OF STEM THERMOMETER

1. **Completely fill a container with ice.**
2. **Add clean water (ice should not float).**
3. **Immerse thermometer.**
4. **Stir well.**
5. **Allow 30 seconds before adjusting to 32°F.**



FOOD CONTAMINATION



CROSS CONTAMINATION

Cross contamination occurs when germs are moved from one food or surface to another.

Foodborne illness has resulted from:

- Adding contaminated ingredients to food.
- Food contact surfaces (equipment and utensils) that were not properly cleaned and sanitized.
- Allowing raw food to touch or drip on ready-to-eat food.
- Hands that touch contaminated food then ready-to-eat food.

Avoid other cross contamination by:

- Using separate cutting boards and utensils for raw products (such as shell eggs, meat, fish, poultry) and ready-to-eat food or cleaning and sanitizing equipment in between uses.
- Separating dirty equipment from food or clean equipment.
- Starting with a clean, sanitized work surface and cleaning and sanitizing all work surfaces, equipment, and utensils after each task.
- Not storing anything in ice that will be consumed.

CLEANING & SANITIZING

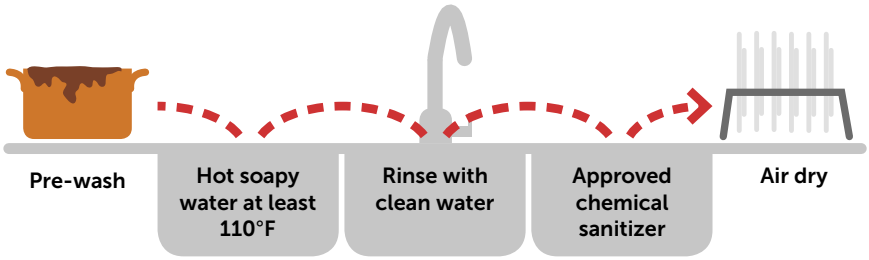
Make sure equipment is clean and sanitized by washing as often as necessary. When in use, clean and sanitize utensils and equipment every four hours.

SANITIZER BUCKETS —

Chlorine and Quaternary Ammonia (Quats) are types of approved sanitizers. Follow manufacturer recommendations for proper concentration and contact time. Test the sanitizer with paper test strips to check the concentration. Keep a cloth stored in a sanitizer bucket anytime there is food service or preparation.

THREE-COMPARTMENT SINK —

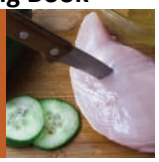
Always use a properly set up three-compartment kitchen sink for proper manual warewashing and follow the five steps: pre-wash (scrape), wash, rinse, sanitize, and air dry.



DISH MACHINES (HIGH TEMP AND CHEMICAL) —

Sanitizing is reducing the number of germs to safe levels. Chemicals and heat are used to sanitize food contact surfaces. Read the manual or data plate on machine for proper operation. Surface temperature of food contact surfaces in a high temperature machine must reach at least 160°F. Measure the proper concentration of chemical sanitizer by using test strips. Measure temperature of high temperature dish machine by using a min-max thermometer or temperature-sensitive tape.

FOOD CONTAMINATION



OTHER SOURCES OF CONTAMINATION

WASHING PRODUCE —

Wash fruits and vegetables under running water before cutting, combining with other ingredients, or cooking. Pests and dirt can hide in the inner leaves of produce. Remove outer leaves and pull lettuce and spinach completely apart. Rinse thoroughly. Cut away bruised or damaged areas when preparing fruit and vegetables.

UTENSIL STORAGE —

Store utensils in the following manner:

- With handles pointing in the same direction.
- On a smooth, easily cleanable food contact surface
- In water that is 41°F or below, 135°F or above
- Under running water

PEST CONTROL (RODENT AND INSECT) —

Examples of pests include **cockroaches**, **flies**, and **rodents**.

Integrated Pest Management (IPM) is a series of prevention methods used to keep pests away and to control infestation:

- Deny access, food, and shelter.
- Work with a licensed pest control operator.
- Seal all gaps and openings in floors, walls, and ceiling.
- Keep doors, screens, and windows closed to keep pests out.
- Keep air curtains operational.

Signs of a pest infestation include:

- Seeing pests in various sizes and stages of development.
- Pest activity noted on a report from a licensed pest control operator.
- Finding rodent droppings on floors or equipment or cockroach feces (small black specks) on walls and floors.
- Bite marks on food containers.

A single rodent in a facility requires immediate pest control consultation. Do not use pesticides labeled as "household use only." Only a licensed pest control operator can apply restricted-use pesticides.

SMOKING/EATING IN KITCHEN —

Rules regarding smoking, eating, and drinking in the kitchen:

- Prohibit eating, smoking, and drinking while preparing or serving food, while in areas used for preparing or serving food, or while in areas used for washing equipment and utensils.
- Eating and smoking are only permitted in designated areas away from food or ware washing areas.
- Smoking areas must be compliant with the Nevada Clean Indoor Air Act.

REFRIGERATED STORAGE

Proper food storage and preparation are key components of preventing foodborne illness. Store and prepare foods to protect them from cross contamination.

Keeping foods covered, storing raw animal products below and away from ready-to-eat foods, using clean and sanitized equipment /utensils, and enforcing overall good employee practices will help keep food safe.

GLOSSARY

Approved Source/Supplier
A grower, supplier, manufacturer, processor, or any person or business providing food for sale or consumption that is acceptable to the health authority, based on a determination of conformity with principles, practices, and generally recognized standards that protect public health.

Calibrate
To adjust, by comparison with a known standard, the accuracy of a measuring instrument such as a thermometer.

Consumer Advisory
A written statement that informs consumers about the increased risk of foodborne illness when eating raw or undercooked animal products, and identifies any items on a food establishment's menu that contain raw or undercooked animal products.

Contamination
The presence of extraneous, especially infectious, material that renders a substance or preparation impure or harmful. The three types of contamination include physical, biological, and chemical hazards.

Cooling
The two stage process of reducing food temperatures quickly. Stage one is to cool from 135°F to 70°F in two hours, then stage 2 is from 70°F to 41°F in four hours. Cooling cannot exceed six hours total.

Cross-contamination
The passing of germs, microorganisms or other harmful substances such as chemicals from one surface to another through improper or unsanitary equipment, procedures, or products.

Employee Health Policy
Procedures to identify and restrict/exclude employees who may transmit foodborne pathogens in food. It also provides hygienic interventions that prevent the transmission of foodborne viruses and bacteria in food establishments.

Equipment
An article that is used in the operation of a food establishment including but not limited to a freezer, grinder, hood, ice maker, meat block, mixer, oven, reach-in refrigerator, scale, sink, slicer, stove, and table.

Food
A raw, cooked or processed edible substance, ice, beverage, or an ingredient used, or intended for use or for sale, in whole or in part for human consumption. Chewing gum is also considered food.

Foodborne Illness
Adverse health effects resulting from the ingestion of contaminated or adulterated food or water.

Germ
A microorganism, especially one that causes disease.

Imminent Health Hazard
A significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or closing of operation such as loss of water, sewage backup and pest infestation.

Infestation
The presence of an unusually large number of insects or animals in a place, typically so as to cause damage or disease.

Parasite
An organism that lives in or on another organism (its host) and benefits by deriving nutrients at the host's expense.

Person in Charge
An Individual present at a food establishment who is knowledgeable and responsible during its operation.

Pest
Any unwanted and destructive insect or other animal that harms food or crops and can spread disease by cross-contamination.

GLOSSARY

Pesticide
A substance or agent used to kill pests, applied by a certified pest control operator in a food establishment.

Reheat
To apply heat to a food product that has been previously cooked.

Ready-To-Eat (RTE) Food
Food that is edible without additional preparation or cooking.

Sanitize
Application of high heat or chemicals on cleaned food-contact surfaces to reduce the number of illness causing germs or microorganisms to acceptable levels.

Shellstock
Raw, in-shell molluscan shellstock such as clams, oysters, or mussels.

Symptoms
A sign or indication of a disorder or disease, usually a noticeable change in how a person feels or looks.

Temperature
The amount of heat or cold measured in a product with a thermometer.

Temperature Danger Zone
Temperature range in which germs or microorganisms grow at an unsafe rate (between 41^0F-135^0F).

Thawing
To change from a solid, frozen state to a refrigerated temperature by an approved method. It is also known as defrosting.

Thermometer
A device designed to measure temperatures.

Time and Temperature Control for Safety (TCS)
Food that requires time and temperature control for safety to limit pathogenic microorganism growth or toxin formation, such as meat, fish, eggs, milk, and cut lettuce.

Time as a Public Health Control
A procedure in which time is used to control the growth of germs or microorganisms. Food held using this procedure must be served, sold, or discarded after four hours.

Utensils
A food contact implement or container used in the storage, preparation, transportation, dispensing, sale, or service of food that is multi-use or single-use such as deli paper, tongs, spoons, ladles, scoops, etc.

SNHD Southern Nevada Health District

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Las Vegas, NV 89127
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NOTES

SNHD
Southern Nevada Health District

FOOD

HANDLER

Risk Category	Description	Inspection Frequency
1	**PRE-PACKAGED FOOD & MINIMAL FOOD OPERATIONS** Establishments that serve or sell only pre-packaged foods. Open foods are limited to non-TCS products. Establishments that prepare only non-TCS foods. Also includes permits with no food. *Examples: Packaged food stores/markets, convenience store markets, gift shops, donut shop (*retail *only), liquor stores, liquor/soda pump rooms, bars without TCS foods ice machine rooms, dishrooms, food courts, warehouses, dry storage areas, portable units for the service of food without TCS foods*	A grade = Annually "B" Grade = within 9 months "C" Grade = within 6 months IHH Closure = within 6 months >40 Demerit Closure = within 3 months
2	**LIMITED FOOD OPERATIONS** Establishments that handle open TCS foods. Establishments where most products are prepared/cooked and served immediately. May involve hot and cold holding of TCS foods after preparation or cooking. May involve cooling from ambient (4 hour). *Examples: convenience store delis, bars with TCS foods (including banquet/portable bars), fast food without cooling, sandwich shops/delis, ice cream shops, smoothie shops, coffee shops, sushi bars, butcher shops, garde manger (most), bakeries without cooling, support area/kitchens (salad prep, dessert prep, "pantry", staging areas, wait stations), buffet stations, refrigerated storage w/open TCS foods, portable units for the service of food with TCS foods , schools*	A grade = Annually "B" Grade = within 9 months "C" Grade = within 6 months IHH Closure = within 6 months >40 Demerit Closure = within 3 months
3	**COMPLEX FOOD OPERATIONS** Establishments that have complex preparation of food including cooking and cooling (6 hour) TCS foods, also usually involves hot and cold holding. *Examples: Fast food/quick service w/cooling, grocery store deli w/cooling, support area/kitchens w/cooling, garde manger w/cooling, bakeries w/cooling, full-service restaurants w/cooling, main kitchens, banquet kitchens*	A grade = Twice annually "B" Grade = within 9 months "C" Grade = within 6 months IHH Closure = within 6 months >40 Demerit Closure = within 3 months
4	**SPECIAL PROCESSES, PROCESSING & HIGHLY SUSCEPTIBLE POPULATIONS** • Establishments serving highly susceptible populations. *Examples: Childcare kitchens (less than school age), senior centers, senior apartment food service* • Establishments that conduct specialized processes, e.g., smoking and curing; reduced oxygen packaging for extended shelf-life. This does not include holding of food packaged using special processes. *Examples: Facilities with required HACCP plans/waivers (produce/package food using ROP 2 barrier or cook chill, smoking, curing, using food additives, molluscan shellstock life-support system, sprouting seeds or beans, juice processing)* • Establishments that processes food and then wholesale. *Examples: Facilities FDA or USDA inspected, processors that wholesale their product*	A grade = Twice annually "B" Grade = within 9 months "C" Grade = within 6 months IHH Closure = within 6 months >40 Demerit Closure = within 3 months

Foodborne Illness Outbreak Response Guide

July 13, 2018

Office of Epidemiology and Disease Surveillance
Division of Environmental Health
Southern Nevada Public Health Laboratory

List of Acronyms

CDC – Centers for Disease Control and Prevention

CHO – Chief Health Officer

CIFOR – Council to Improve Foodborne Outbreak Response

DDCS – Disease Data Collection Specialist

DIIS – Disease Investigation and Intervention Specialist

EA – Environmental Assessment

EH – Environmental Health

FBI – Foodborne Illness

FDA – Food and Drug Administration

FIT – Foodborne Illness Taskforce

GIS – Geographic Information Systems

HAN – Health Alert Network

HCP – Health Care Provider

LIMS – Laboratory Information Management System

NAC – Nevada Administrative Code

NDPBH – Nevada Division of Public and Behavioral Health

NEARS – National Environmental Assessment Reporting System

NORS – National Outbreak Reporting System

NSPHL – Nevada State Public Health Laboratory

OEDS – Office of Epidemiology and Disease Surveillance

OPHP – Office of Public Health Preparedness

PHEN – Public Health Event Notification

PIO – Public Information Office

SNHD – Southern Nevada Health District

PCR – Polymerase Chain Reaction

PIC – Person in Charge

SNPHL – Southern Nevada Public Health Laboratory

USDA – United States Department of Agriculture

WHO – World Health Organization

Table of Contents

1. Administration

1.1 Personnel Involved

During a foodborne illness (FBI) or injury outbreak investigation, at least two departments will be involved: The Office of Epidemiology and Disease Surveillance (OEDS), and Environmental Health (EH). In some cases, the Southern Nevada Public Health Laboratory (SNPHL) may also be requested to assist by providing laboratory testing services. Other departments may also be involved depending on the scale of the investigation (e.g., Public Information Office [PIO], Office of Public Health Preparedness [OPHP]). If there is any suspicion of intentional food contamination or bioterrorism, OPHP will be involved. Within each department, the following positions may be part of an investigation, which form the Foodborne Illness Taskforce (FIT):

Office of Epidemiology and Disease Surveillance:

- Disease Data Collection Specialist(s) (DDCS)
- Disease Investigation and Intervention Specialist(s) (DIIS)
- Disease Surveillance Supervisor
- Epidemiologist(s)
- Epidemiology Surveillance Project Coordinator

Environmental Health:

- Environmental Health Specialist(s) trained in FBI (“EH investigator”)
- Environmental Health Specialist(s) in Food Operations assigned to implicated facility (“Food Ops inspector”)
- Environmental Health Senior (“FIT EH Senior Lead”)
- Environmental Health Manager, Food Operations

Southern Nevada Public Health Laboratory:

- Clinical Laboratory Scientist(s)
- Laboratory Technologist(s)
- Laboratory Supervisor(s)
- Laboratory Director

1.2 Methods of Communication

Most communication is conducted via secure Southern Nevada Health District (SNHD) email, but face-to-face meetings may be necessary in some situations. The frequency of face-to-face meetings are determined by the needs of the investigation and the judgment of the principal investigators. The investigation almost always starts within OEDS, while EH and SNPHL are subsequently notified as needed. Typically, a complaint is initially received through or forwarded to OEDS or EH. EH will always

notify OEDS if they receive an FBI or injury complaint, but OEDS may not necessarily need to notify EH. If OEDS determines that an establishment inspection may be warranted, an email is sent to EH with details about the complaint(s).

1.3 Forms and Files to be Used in an Outbreak

Different departments utilize different forms and files during an investigation. Below are commonly used forms and files by department:

Office of Disease Surveillance and Epidemiology:

- Initial investigation:
    - FBI complaint summary report ("FIT report") (generated within FBI database)
    - FBI Complaint Algorithm (Appendix A)
    - FIT (Foodborne Illness Task Force) assessment log (H:\Apps\EPI-EH Shared\FIT)

- Escalated investigation:
    - Outbreak line list template (H:\Apps\EPI-EH Shared\FIT\FIT Protocols)
    - "Is it an outbreak?" guide (Appendix B)

- Specimen collection (H:\Apps\EPI-EH Shared\FIT\Specimen collection)
    - Laboratory requisition form (Appendix C)
    - Label template (Appendix D)
    - Patient instructions (Appendix E)
    - Stool collection consent form (for child and if needed) (Appendix F)

Environmental Health:

- 674 FBI Investigation Form (Appendix G)
- 916 Routine Grading Inspection Form (Appendix H)
- Environmental Assessment Site Evaluation Form (EA) (single page) (Appendix I)
- Manager's Interview Script (Centers for Disease Control and Prevention [CDC] document) (Appendix J)

Southern Nevada Public Health Laboratory:

- Food sample collection (H:\Apps\EPI-EH Shared\FIT\Food testing)
    - Food Sample Collection Procedure (Appendix K)
    - Environmental investigation requisition form (Appendix L)
    - Chain of Custody form (Appendix M)

- The laboratory forms are generated through the department Laboratory Information Management System (LIMS) electronically based on the service provided.

2. Detection of Outbreaks

2.1 Foodborne Illness and Injury Surveillance

OEDS conducts multi-channel surveillance of FBI and injury complaints within Clark County, Nevada. OEDS may receive complaints from the public primarily through phone calls or submission of online reports. At least once per year, OEDS conducts data analysis of submitted complaints using the FBI Surveillance and Data Analysis Protocol (Appendix N).

Phone Calls

When a person calls OEDS (extension 1300) to report a FBI or injury, an available DDCS or DIIS will open the FBI database and ask the listed questions regarding the individual's symptoms, food consumed, establishment in question, and so on. If multiple individuals from the same group that dined together became ill, the DDCS/DIIS will also document these complaints if the required information is known. Otherwise, the DDCS/DIIS will either ask the caller to have the other ill individuals themselves call SNHD when available or will obtain their contact information from the caller for interview.

Online Reports

The public also has the option of submitting FBI and injury complaints on the SNHD website. When an online report is submitted, designated DDCS/DIIS will receive an email notification. The DDCS/DIIS can then log into the online reporting system (https://www.southernnevadahealthdistrict.org/wp-content/plugins/snhd-foodborne-illness/portal/login.php) to download the excel-based report and then import it into the FBI database. The DDCS/DIIS will then review the information to ensure accuracy and completeness. If any information on the report is unclear, the DDCS/DIIS will either email or call the complainant for clarification.

In instances in which the DDCS/DIIS suspects the establishment may be responsible for the illnesses or injuries, he/she may also check iwaspoisoned.com (either at the website www.iwaspoisoned.com or by logging in to the dashboard at https://dashboard.dinesafe.org/login) and www.yelp.com for other complaints. In cases of a potential cluster or outbreak, the DDCS/DIIS may reach out to individuals reporting illness or injury on these websites, if contact information is available, to file a complaint with SNHD either over the phone or online. OEDS has a yelp account (epidemiology@snhdmail.org) that allows DDCS/DIIS to send messages to yelp users. OEDS can provide the login password if needed.

Currently, iwaspoisoned.com sends auto-generated email notifications to certain DDCS/DIIS if a complaint is filed on their website at a local restaurant. For such complaints, a DDCS will send an email and/or call the complainant, if contact information is available, recommending him/her to file a complaint over the phone or on the SNHD website.

Weekend and Holiday Surveillance

OEDS Standby Staff will monitor standby phone on weekends and holidays in the event that foodborne illness is reported over the phone. Additionally, once every 24-hour period on weekends and holidays, OEDS Standby Staff will check the standby email address (OEDSstandy@snhd.org). This email address will receive automatic emails every time a foodborne illness report is submitted via the SNHD website. If five or more complaints are received involving the same food establishment, the OEDS Standby Staff will notify EH Standby Staff at 702-480-9749 and forward the foodborne illness complaint information to EHStandby@snhd.org. The EH Standby Staff will then review the information and determine the appropriate response and timing.

Environmental Health Complaints

The public can also file sanitation complaints (e.g., observation of improper food handling, undercooked poultry, presence of insects, physical contamination) online or over the phone with an EH staff member. Copies of these reports are then emailed by EH staff to OEDS for possible investigation. If the reporter mentions becoming ill and contact information is available, then a DDCS/DIIS will reach out to him/her to file an FBI or injury complaint over the phone or on the SNHD website.

2.2 Conducting a Preliminary Investigation

Every time OEDS receives a FBI or injury complaint, it will be assessed using the FBI Complaint Algorithm (Appendix A). Note that FBI investigations may also be initiated when a DDCS/DIIS is assigned an enteric illness investigation and it is determined, upon interview of ill individual, that the illness may be connected to an establishment. In general, the steps of a preliminary investigation are as follows (see Appendix O, FBI Complaint Investigation Protocol, for full procedures):

1. Receive FBI or injury complaint(s) or enteric illness investigation
2. Determine if the complaint(s) meets minimum criteria for plausible FBI or injury symptoms
3. Determine if any of the following four situations apply:
    a. Ill person had symptoms consistent with botulism, chemical, and/or marine toxin poisoning
    b. Ill person is confirmed for any of the six enteric foodborne illnesses being surveilled (Shiga toxin-producing *Escherichia coli*, Shigellosis, Salmonellosis, Campylobacteriosis, Yersiniosis, Vibriosis)
    c. The illnesses or injuries are related to an event, such as a conference or wedding and attack rate indicates possible cluster or outbreak
    d. Illness or injury in least two unrelated groups, and/or three ill in the same party but at least two different households, and/or at least four individuals in a shared household
4. If at least one of the situations from 3a-3d apply, email designated staff from OEDS and EH to determine if further investigation is warranted

2.3 Hypothesis Generation

Once it has been determined that the complaint(s) meet the epidemiological criteria for investigation, the DIIS investigating the complaint (primary investigator) will attempt to construct a hypothesis for the illnesses or injuries based on the information available. For example, if an individual reported consuming undercooked chicken during the incubation period and the lab results indicate a positive Salmonella culture, then the hypothesis would indicate that the individual became ill due to the consumption of the undercooked chicken. This hypothesis along with other information outlined in the FBI Complaint Investigation Protocol will be emailed to EH staff and others as designated on these guidelines.

2.4 Alerting and Assembling Team Based on Scale of Investigation

The DIIS that received the last reported complaint of a particular establishment will begin the investigation and assume the role of primary investigator. The team necessary for the investigation is typically determined by the number of individuals affected and/or the scale of the cluster or outbreak. Most cluster investigations only require the DIIS receiving the complaint (primary investigator) and one or two individuals from EH. However, as the scale of the investigation grows, more personnel may be needed to investigate the possible or confirmed outbreak, including staff from SNPHL. During an FBI outbreak investigation, several roles may need to be assigned including a field investigation team (typically one person from OEDS and one from EH), a stool collection and lab coordinator (typically one person from OEDS to recruit patients for stool collection, create requisition forms, coordinate sample pick up by SNPHL, and create events in Trisano), a data analyst (typically an Epidemiologist), report writer, and so on.

If investigation staff determines that SNPHL should be involved, the Laboratory Director or designee should be consulted by the primary investigator to discuss the following topics:

- Preliminary epidemiological findings
- Possible priorities for the investigation
- Supplies that may be needed
- Number of specimens to be collected
- Supplies needed for specimen collection and courier activities

If it is determined that OEDS is receiving a high volume of calls from the public, then Rocky Mountain Poison & Drug Center may be contracted to screen calls instead.

2.5 Assessing Priority of Outbreaks

The priority of the outbreak should be based the following factors from a preliminary investigation:

- The number of ill or injured individuals
- The number of individuals reporting illness or injury
- Associations with a specific location and/or event
- Severity of illnesses or injuries

- Number of hospitalizations and/or deaths
- Novel diagnosis

SNPHL will provide an estimation of the timelines specific for the investigation, name a designee to represent the laboratory in the investigation, and obtain names and roles of those involved in the investigation. In addition, SNPHL will require completed requisitions and instructions as to where to send preliminary and final results.

2.6 Establishing Goals and Objectives of Investigation

The primary goal of conducting an FBI outbreak investigation is to identify the source of the outbreak and to halt disease transmission or injuries in a timely manner. The following goals and objectives are recommended and are based on the 10-step outbreak investigation model:

1. Identify investigation team and resources (section 2.4).
    - Based on the available information, establish investigation team and identify potential resources needed.
2. Establish the existence of an outbreak (section 2.4)
    - Ensure that there are more cases than normally expected.
3. Verify the diagnosis (section 3.1)
    - Prepare a minimum of 5 stool specimen collection kits (or as recommended by SNPHL), arrange for patient stool kit pick up and drop off, and conduct laboratory testing of stool samples. EH and SNPHL will coordinate food testing as necessary. The primary goal is to have at least two stool samples test for the same etiologic agent. Obtain relevant medical records if available. Other sample types (e.g., blood) may be collected if recommended.
4. Construct case definition (section 3.4)
    - The case definition should include information on symptoms, laboratory results, and essential elements of person, place and time.
5. Find cases systematically and develop line listing (section 3.4)
    - Ensure efficient and accurate data collection (demographic, clinical, and risk factors) through the development and implementation of online surveys and/or interviewing ill individuals via telephone.
6. Perform descriptive epidemiology and develop hypotheses (section 3.4)
    - Interpretation of descriptive, clinical, and risk factor data may include but are not limited to development of an epi-curve and/or a spot map.
7. Evaluate hypotheses and perform additional studies as necessary (section 3.4)
    - Test hypotheses through implementing analytical studies (case control or retrospective cohort) and interpret data via statistical analysis software and/or other applications such as SAS, Microsoft Excel, GIS (geographic information systems), and/or Survey Monkey.
8. Implement control measures (section 4.1 and 4.2)

- Control measures include recommending isolation and quarantine of cases, recommending a product recall, modifying the facility's processes, excluding ill workers, closing facilities depending on the severity and nature of the outbreak, drafting and releasing a health alert, press release, fact sheets or other communication materials, and others.

9. Communicate findings (section 6)
    - Communicate findings to internal staff and any external partners or agencies. Findings will be communicated to internal staff by providing daily (or as needed) outbreak summaries via email to the investigation team and verbal summaries during meetings, and/or through the distribution of an interim and final outbreak report using the Interim and Final Report Outline (Appendix P). Findings will be communicated to external partners and agencies through the National Outbreak Reporting System (NORS) (such as the CDC and NDPBH [Nevada Division of Public and Behavioral Health]), conference calls, interviews, and interim and final outbreak reports.
10. Maintain surveillance
    - Based on ongoing surveillance, decide if the outbreak is over.

2.7 Assigning Investigation Activities

The primary investigator and lead staff will assign roles for OEDS, EH, and SNPHL to carry out based on the established goals and objectives. See section 2.4 for possible roles and responsibilities.

SNPHL activities are assigned by OEDS and generally include evaluation of the submitted specimens for the following:

- 22-test PCR (Polymerase Chain Reaction) screening panel for viral, parasitic, and bacterial enteric pathogens
- Culture of the specimens for specific bacterial pathogens with specialized serological testing, if required
- Specific PCR testing for confirmation of suspected pathogens

Screening results are typically available within 24 hours from specimen receipt. Culture and specific PCR testing may take 5-7 days to complete. However, preliminary reports will be issued before final results are available. SNPHL will provide specimen courier and collection services if applicable. All preliminary and final reports will be transmitted electronically through LIMS to the location designated by OEDS.

3. Investigative Procedures

3.1 Conducting Specimen Testing and Assessment

Based on the preliminary investigation, OEDS will conduct a hypothesis on the causative agent(s) according to the symptoms, incubation periods, and other factors. If testing is warranted, arrangements

to collect samples will be made by OEDS with the appropriate ill individuals. SNPHL conducts testing of samples (typically stool) and the SNPHL representative assigned to the investigation will participate acting as a subject matter expert. If additional assistance is necessary due to the volume of samples, assistance may be requested from NSPHL and/or CDC. NSPHL may also request assistance from CDC, Food and Drug Administration (FDA) and/or USDA as necessary. For the full specimen testing protocol, see the FBI Complaint Investigation Protocol. All laboratory findings will be reported to OEDS. Further testing and/or referral of the specimens will be requested by OEDS and/or SNPHL. Once an agent is suspected but not confirmed (for example, after receiving the test result of the first sample), EH may share these findings with the establishment, but not the general public.

3.2 Conducting an Environmental Assessment

Overview

The purpose of the EA is to assess factors that affect food safety of the facility in question and understand the condition of the establishment during the time of exposure. The EA is carried out in two parts. Part 1 is an unannounced site evaluation, which is when the 674 FBI Investigation Form is completed. Part 2 is a scheduled manager interview where the NEARS (National Environmental Assessment Reporting System) Manager's Interview Script is followed. If the investigation is reported to NORS by OEDS, then EH will report the information found during the EA to NEARS.

Communication

Upon notification from OEDS, the FIT EH Senior Lead will select an EH investigator to lead the EA. The FIT EH Senior Lead will use Envision Connect to determine which Food Operations supervisor and EH senior the implicated restaurant is assigned to. The FIT EH Senior Lead will then send an email to alert them that the establishment will need a FBI or injury investigation the same day. On this email, the assigned investigator, Food Ops inspector, and FIT EH Manager of Food Operations will be Cc'd. The assigned EH investigator will then contact the Food Ops inspector to schedule the unannounced site evaluation portion of the EA. If the Food Ops inspector is not able to conduct the site evaluation the same day, his/her supervisor or senior will schedule another staff member to fill in.

Site Evaluation

The EH investigator and the Food Ops inspector will visit the implicated food establishment the same day the report was received to perform the unannounced site evaluation. During this time, the Food Ops inspector will complete a 916 Routine Grading Inspection Form while the EH investigator will perform a 674 investigation and will also fill out the Environmental Assessment Site Evaluation Form from NEARS.

After introducing themselves to the person in charge (PIC) and explaining the purpose of the visit, both environmental health specialists will walk in the kitchen or food preparation areas together and take turns interacting with the PIC of the establishment as needed. The EH investigator will examine call out logs, evaluate the employee health policy and ask questions relating to the state of the establishment during the exposure period. If a specific food is implicated, the Food Ops inspector will follow the food

flow of those ingredients including their source/vendor, storage location, preparation practices, and method of service. Establishment staff may be asked to demonstrate a process to get a clear idea of any food safety infractions that may occur during food preparation. Illustrations of food flows or process diagrams may be drafted on a supplemental form and added to the 674. If the same batch of implicated food is still present, staff may return to take samples. The goal of this visit is to get a clear understanding of the state of food safety in the kitchen or food preparation areas during the period of exposure. It is important for the EH investigator and the Food Ops inspector to stay together during the site evaluation so as not to overwhelm the restaurant's PIC, but also so that everyone gets all the information. Before leaving, both inspectors will inform the restaurant's PIC that EH staff may contact them to set up a manager's interview.

Manager's Interview

If the investigation will be reported to NORS by OEDS, then EH will further the investigation by administering the Manager's Interview Script from the NEARS Instruction Manual (Appendix Q). Note that if the investigation will not be reported to NORS, then the manager's interview will not be conducted and the investigation will end with the site evaluation. The manager's interview will take place at the establishment and will be scheduled ahead of time so that the establishment's PIC can gather paperwork and procure adequate staffing to allow him or her to step away from the kitchen and focus on the interview. The EH investigator will schedule the interview with the establishment and invite the Food Ops inspector who may attend or not based on his or her availability. In large outbreak situations or in unusual circumstances, OEDS staff may be invited to the manager's interview as well to assist. All attending EH SNHD staff will manually enter their time in Envision Connect by using the service code 674 and adding a comment noting that a manager's interview was performed as part of an EA.

FIT Assessment Log Tracking and Document Storage

Each complaint is logged and organized on the FIT Assessment Log located here: H:\Apps\EPI-EH Shared\FIT. The blue columns are filled out by OEDS and the green columns are filled out by EH staff as soon as the information becomes available. Violation trends observed, contributing factors identified, or unique observations noted will be described in the "Results/Comments" column.

All reports from the EH investigation are to be saved here: H:\Apps\EPI-EH Shared\FIT\FBI Complaints, arranged by year and month. A folder for the implicated food establishment will have already been created by OEDS and the FIT Report will be saved inside. The EH investigator will add the following reports to the folder: 674 FBI Investigation Form, 916 Routine Grading Inspection Form, and the Manager's Interview Script, if conducted. All activities associated with the investigation will also be input into Envision Connect.

3.3 Conducting Food and Environmental Testing

If recommended by OEDS, EH, and/or SNPHL, testing of food and/or surfaces from the establishment in question will be conducted. SNPHL provides in-house biological analysis of food specimens. See Food Sample Collection Procedure. If SNPHL is unable to perform the test, they will recommend an alternate

laboratory. Requests for chemical, radiological contaminants, or other food adulterants are forwarded to NSPHL for analysis. SNPHL can detect the following contaminants in food:

- Specific cultures for the following: *Brucella, Campylobacter, Clostridium, Listeria, Salmonella, Shigella, STEC, Vibrio, Yeast*

- Specialized screens: Culture of stool specimens for enteric pathogens, particularly Enterobacteriaceae, PCR screen for gastrointestinal pathogens including *Campylobacter (jejuni, coli, and upsaliensis), Clostridium difficile (A/B), Plesiomonas shigelloides, Salmonella, Yersinia enterocolitica, Vibrio (parahaemolyticus, vulnificus and cholerae), Diarrheagenic E. coli/Shigella, Enteroaggregative E. coli (EAEC), Enteropathogenic E. coli (EPEC), Enterotoxigenic E. coli (ETEC), Shiga-like toxin producing E. coli (STEC), E. coli O157, Shigella/Enteroinvasive E. coli (EIEC), Cryptosporidium, Cyclospora cayetanensis, Entamoeba histolytica, Giardia lamblia, Adenovirus F 40/41, Astrovirus, Norovirus GI/GII, Rotavirus A, Sapovirus (I, II, IV, and V)*

3.4 Conducting Data Analysis

Data analysis of an outbreak will be conducted on a case-by-case basis by an epidemiologist. Based on the scenario, many variables can be evaluated depending on what is captured, including but not limited to:

- Number of complaints received
- Number of different parties affected
- Age range
- Gender
- Food likely to be the source
- Onset days/times
- Symptoms
- Number of complainants tested and results

Analytical studies, such as retrospective cohort or case-control, may also be conducted on a case-by-case basis.

4. Implementation of Control Measures

4.1 Controlling at Source

During the site evaluation portion of the EA, the Food Ops inspector and the EH investigator will be identifying all possible sources of illness or injury within the establishment including potential contamination, proliferation, and survival issues. For every potential source of illness or injury, EH will implement an immediate corrective action and work with the establishment's PIC to establish a plan that prevents that violation from occurring again. For example, if a food worker is observed putting on gloves without washing his/her hands first, EH staff will stop the food worker and instruct him/her to remove and discard the gloves, perform a proper hand wash, and then put on new gloves before resuming food preparation. Then, EH staff will talk with the PIC, encouraging further staff training, active

managerial control and supervision of food workers, and physical solutions such as relocating gloves near the hand sink to promote proper handwashing.

If food is suspected to be potentially contaminated or handled in a way that would promote survival or proliferation of pathogens (e.g., undercooked food, food left out in the temperature danger zone), EH staff will recommend that the PIC voluntarily discard the food. If the PIC declines, EH staff will place the product on hold until the PIC can confirm the food is safe to eat via proper lab testing. Regardless, the suspected food will not be served to customers until proven safe to protect the public.

4.2 Controlling Secondary Foodborne Illness Transmission

The sections below provide measures and recommendations to help detect, prevent and control secondary FBI transmission.

Information for Healthcare Providers (HCPs)

If it is recommended that HCPs remain alert regarding potential patients being seen that could be connected to the outbreak (including injuries), multiple methods may be utilized such as using the Health Alert Network (HAN) distribution list and/or the Fusion Center healthcare distribution list though OPHP. Public Health Advisory may be issued to:

- Encourage reporting of the suspected or confirmed illnesses or injuries
- Encourage specimen collection and testing. If requested, HCP will work with SNPHL to identify commercial laboratory test codes. If specimen testing is not covered by patient's insurance, SNPHL may test specimens if collected by OEDS.
- Provide treatment guidance

Public Information: Eliminate or Minimize Opportunities for Further Transmission

If the outbreak is extensive, it may be recommended to provide information and recommendations to the public. Potential information available may include:

- How to report illnesses or injuries to SNHD
- Boil water orders
- Food preparation advice
- Food disposal advice

Potential methods to disseminate public information includes: an outbreak report or article posted on the SNHD website, TV interviews, radio or TV advertisements, and so on.

Personal Hygiene Information

If indicated, personal hygiene information may also be made available. Recommendations for cases may include to:

- Not prepare food for other persons until case is asymptomatic for 24 hours
- Thoroughly wash hands after defecation, urination, and before meals
- Use separate hand towels to dry hands
- Clean toilet seats with disinfectant after use

High-Risk Groups

Certain high-risk individuals are at risk for severe illness and poor outcomes if exposed to contaminated food. Safe food handling practices should be particularly emphasized to persons preparing food for high-risk individuals including pregnant women and immunocompromised groups.

Exclusion Measures

To help prevent secondary transmission, exclusion measures may need to be put in place for cases in certain occupations, such as food handlers and medical personnel based on Nevada Administrative Code (NAC) 441A, or as directed by OEDS personnel. Regarding student and day care cases, it is recommended that children under 5 years of age are excluded. See the Communicable Disease Chart for Schools and Child Care Centers (Appendix R) for disease-specific exclusion recommendations. In addition, older children and adults in situations without proper handwashing facilities may also need to be excluded.

Infection Control Precautions

Infection control measures for hospitalized and institutionalized persons may include but is not limited to patient isolation, barrier-nursing precautions, proper disposal and/or decontamination of soiled clothing and bedding, and strict personal hygiene measures.

5. Determining Need to Draft and Disseminate Interim Report

Drafting an interim report will depend upon the size of the outbreak investigation, the amount of media coverage and the approval of OEDS, EH, SNPHL, and/or the Chief Health Officer (CHO). Historically, SNHD has posted interim reports for larger outbreaks including the Firefly salmonellosis investigation and several legionellosis investigations on the SNHD website.

6. Communication of Findings

6.1 Drafting and Disseminating Interim and Final Report

If the determination has been made to draft an interim report, see Interim and Final Report Outline (Appendix P) for a sample format. SNHD staff involved in an investigation will decide if dissemination of

reports will occur and by what channels. PIO may be consulted.

Initially, all sections of the report will not be completed until the information to complete the section is available. Interim reports can be updated once a week for lengthy investigations. Interim reports will be placed in the proper investigation folder, under the proper year, here: H:\Apps\Administration\EPI\Sharedoc\Responses - Outbreaks and Alerts. The report may be uploaded to the SNHD website as recommended and approved by the Disease Surveillance Supervisor, CHO, and/or other staff. In addition, the report may be shared with stakeholders in the investigation, including the State Epidemiologist(s).

6.2 Submitting Outbreak Report in NORS

Once determined that the event being investigated is an outbreak, a NORS report will be started and eventually completed by the DIIS or epidemiologist assigned to the outbreak.

NORS is an online-based system for reporting outbreaks to NDPBH and CDC and is located here: https://wwwn.cdc.gov/nors. Only those granted access by NDPBH can log in to NORS. To begin a new report, click "Create a new report" in the Quick Start box and follow the step-by-step instructions.

6.3 Submitting Environmental Assessment in NEARS

The NEARS (National Environmental Assessment Reporting System) report is a way to document and communicate the environmental observations and contributing factors observed during the investigation. It is the sister system to NORS with an environmental health focus. The NEARS report will be submitted to the CDC by the EH staff investigating the outbreak. Only those granted access to NEARS will enter the data.

The NEARS report can be submitted at: https://wwwn.cdc.gov/EHSNet/Default.aspx. To begin a new report, login and select Open Evaluations on the left menu, then select the most current Study Definition from the drop-down menu. For clarification on question intent on the report or other issues, consult the NEARS Instruction Manual.

7. Distribute Debrief (Hotwash) Survey

Once it has been determined that the outbreak investigation has been completed, the primary investigator or Epidemiologist will login to Survey Monkey (www.surveymonkey.com), create a copy of the hotwash survey (Appendix S) template called "OEDS Investigation Participant Feedback Survey" and distribute the survey via email to all staff involved in the investigation. The aggregate answers from the survey will be shared with the staff involved in the investigation. If necessary, staff with meet to further discuss the survey results.

8. Determining if Local Outbreak if Part of Multi-Jurisdictional Outbreak

There are eight categories that define a multi-jurisdictional outbreak according to the Council to Improve Foodborne Outbreak Response (CIFOR):

1. Outbreaks affecting multiple local health jurisdictions (e.g., city, county, town) within the same state
2. Outbreaks involving multiple states
3. Outbreaks involving multiple countries
4. Outbreaks affecting multiple distinct agencies (e.g., public health, food-regulatory, emergency management)
5. Outbreaks, regardless of jurisdiction, caused by highly pathogenic or unusual agent that may require specialized laboratory testing, investigation procedures, or treatment
6. Outbreaks in which the suspected or implicated vehicle is commercially distributed, processed, or ready-to-eat food contaminated before the point of service
7. Outbreaks involving large numbers of cases that may require additional resources to investigate
8. Outbreaks in which intentional contamination is suspected

Jurisdictions that are or may be impacted by an outbreak will need to be notified as soon as possible. Consultation with OEDS staff may be needed to determine best course of action for each situation.

9. Resources

a. CDC
   i. Multistate and Nationwide Foodborne Outbreak Investigations: A Step-by-Step Guide https://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/investigations/index.html
   ii. Guidelines for Specimen Collection https://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/specimen-collection.html
   iii. Interpretation of Epi Curves during Ongoing Outbreak Investigations https://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/epi-curves.html
   iv. National Hypothesis Generating Questionnaire https://www.cdc.gov/foodsafety/outbreaks/surveillance-reporting/investigation-toolkit.html
   v. Integrated Food Safety Centers of Excellence https://www.cdc.gov/foodsafety/centers/index.html
b. CIFOR
   i. Guidelines for Foodborne Disease Outbreak Response, Second edition http://cifor.us/downloads/clearinghouse/2nd%20edition%20CIFOR%20Guidelines%20Final.pdf
c. WHO

i. Foodborne Disease Outbreaks, Guidelines for Investigation and Control http://www.who.int/foodsafety/publications/foodborne_disease/outbreak_guidelines.pdf

10. Appendices

Appendix A – FBI Complaint Algorithm

Appendix B – "Is it an Outbreak?" Guide

Appendix C – Specimen Collection Laboratory Requisition Form

Appendix D – Stool Sample Collection Label Template

Appendix E – Stool Collection Patient Instructions

Appendix F – Stool Collection Consent Form (for child)

Appendix G – 674 FBI Investigation Form

Appendix H – 916 Routine Grading Inspection Form

Appendix I – Environmental Assessment Site Evaluation Form

Appendix J – Manager's Interview Script

Appendix K – Food Sample Collection Procedure

Appendix L – Environmental Investigation Requisition Form

Appendix M – Chain of Custody Form

Appendix N – FBI Surveillance and Data Analysis Protocol

Appendix O – FBI Complaint Investigation Protocol

Appendix P – Interim and Final Report Outline

Appendix Q – NEARS Instruction Manual

Appendix R – Communicable Disease Chart for Schools and Child Care Centers

Appendix S – Hotwash Survey

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ARTICLE OPEN

Machine-learned epidemiology: real-time detection of foodborne illness at scale

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Machine learning has become an increasingly powerful tool for solving complex problems, and its application in public health has been underutilized. The objective of this study is to test the efficacy of a machine-learned model of foodborne illness detection in a real-world setting. To this end, we built FINDER, a machine-learned model for real-time detection of foodborne illness using anonymous and aggregated web search and location data. We computed the fraction of people who visited a particular restaurant and later searched for terms indicative of food poisoning to identify potentially unsafe restaurants. We used this information to focus restaurant inspections in two cities and demonstrated that FINDER improves the accuracy of health inspections; restaurants identified by FINDER are 3.1 times as likely to be deemed unsafe during the inspection as restaurants identified by existing methods. Additionally, FINDER enables us to ascertain previously intractable epidemiological information, for example, in 38% of cases the restaurant potentially causing food poisoning was not the last one visited, which may explain the lower precision of complaint-based inspections. We found that FINDER is able to reliably identify restaurants that have an active lapse in food safety, allowing for implementation of corrective actions that would prevent the potential spread of foodborne illness.

npj Digital Medicine (2018)1:36 ; doi:10.1038/s41746-018-0045-1

INTRODUCTION

In the 1800s, John Snow had to go door to door during an epidemic of cholera to uncover its mechanisms of spread.[1] He recorded where people were getting their drinking water from in order to pinpoint the source of the outbreak. Here we scale up this approach using machine learning to detect potential sources of foodborne illness in real time. Machine learning has become an increasingly common artificial intelligence tool and can be particularly useful when applied to the growing field of syndromic surveillance. Frequently, syndromic surveillance depends upon patients actively reporting symptoms that may signal the presence of a specific disease.[2,3] In recent years, syndromic surveillance has also begun to include passively collected information, such as information from social media, which can also lend insight into potential disease outbreaks.[4–6] In this study, we use such observational data to identify instances of foodborne illness at scale.

Frequently, in the United States and elsewhere, efforts to combat disease outbreaks still rely on gathering data from clinicians or laboratories and feeding this information back to a central repository, where abnormal upticks in prevalence can be detected.[7,8] For instance, when foodborne illnesses occur in the United States, determining an outbreak is dependent upon either complaints from large numbers of patients or receipt of serological data from laboratory tests.[9] These processes can be slow and cumbersome and often lead to a delayed response, allowing for further spread of disease.[10] Having the ability to track and respond to outbreaks in real time would be immensely useful and potentially lifesaving.

Here we sought to test the efficacy of a machine-learned model that uses aggregated and anonymized Google search and location data to detect potential sources of foodborne illness in real time. Our primary goal was to use this model to identify restaurants with potentially unsafe health code violations that could contribute to foodborne illness spread, with the hypothesis that our model would be able to more accurately identify a restaurant with serious health code violations than systems currently in place. We find that such an approach can lead to a greater than threefold improvement in identifying potentially problematic venues over current approaches, including a 68% improvement over an advanced complaint-based system that already utilizes Twitter data mining. Our results provide evidence that this type of tool can be used by health departments today to more rapidly pinpoint and investigate locations where outbreaks may be occurring. This model can be expanded by public health departments to reduce the burden of foodborne illness across the United States, and can also be expanded to assist in monitoring a variety of other diseases globally.

FINDER machine-learning methodology

Here we introduce a machine-learned model called FINDER (Foodborne IllNess DEtector in Real time), which detects restaurants with elevated risk of foodborne illness in real time. The model leverages anonymous aggregated web search and location

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Received: 12 February 2018 Revised: 20 July 2018 Accepted: 26 July 2018
Published online: 06 November 2018

Published in partnership with the Scripps Translational Science Institute

npj nature partner journals

data and ensures that specific findings cannot be attributed to individual users. We call this approach machine-learned epidemiology. It complements existing approaches to identifying illnesses with new real-time signals available at large scale.

FINDER applies machine learning to Google search and location logs to infer which restaurants have major food safety violations, which may be causing foodborne illness. This anonymous and aggregated logs data comes from users who opted to share their location data, which already enables other applications, such as estimates of live traffic.

Our method first identifies queries indicative of foodborne illness, and then looks up restaurants visited in aggregate by the users who issued those queries, leveraging their anonymized location history. FINDER then calculates, for each applicable restaurant, the proportion of users who visited it and later showed evidence of foodborne illness in their searches. Notably, in most previous work, a user's location is only known if she searched or posted a message from the location.[11,12] In contrast, our data source is much more comprehensive, allowing us to reliably infer previously visited locations, regardless of whether the user took any action there.

The key challenge is the inherent noise and ambiguity of individual search queries. For example, the query [diarhea] could be related to food poisoning, but also contains a typo and does not convey information about the details of the symptom (e.g., what type of diarrhea, is it experienced by the user or her family member). We solve this challenge with a privacy-preserving supervised machine-learned classifier, which leverages a collection of signals beyond the query string itself, such as search results shown in response to the query,[13] aggregated clicks on those results, and the content of the opened web pages. The resulting classifier has high accuracy in identifying queries related to food poisoning, achieving area under the ROC curve of 0.85, and F1 score of 0.74 in evaluation with three independent medical doctors and separately with three non-medical professionals rating each query. Note that an individual affected by foodborne illness starts feeling symptoms with certain delay (incubation period) after the infection has occurred. While FINDER processes log data in real time, confident inference can only be drawn after incubation period has elapsed for an initial cohort of affected patrons.

Application of FINDER in two cities

In order to test the efficacy of FINDER, we deployed the model in Las Vegas, Nevada and Chicago, Illinois. Every morning, each city was provided with a list of restaurants in their jurisdiction that were automatically identified by FINDER. The health department in each city would then dispatch inspectors (who were unaware of whether the inspection was prompted by FINDER or not) to conduct inspections at those restaurants to determine if there were health code violations. In addition to FINDER-initiated inspections, the health departments continued with their usual inspection protocols. The results of the latter inspections were used as a comparison set, with three comparison groups: all inspected restaurants not prompted by FINDER (referred to as BASELINE below), and two subsets thereof—complaint-based inspections (COMPLAINT) and routine inspections (ROUTINE).

We labeled the restaurants as safe or unsafe based on the outcome of the inspection results and report the accuracy of identifying an unsafe venue across the various comparison groups (FINDER, BASELINE, COMPLAINT, and ROUTINE). Restaurants that received a grade reflective of any sort of serious health code violation were designated unsafe. For a complete description of safe/unsafe criteria, see Supplementary Text. We also broke the results down by the risk level of each venue. This study was designated as non-human subjects research by the Harvard T.H. Chan School of Public Health Institutional Review Board.

Table 1. Number of inspections conducted during the experimental time period

	FINDER	BASELINE
Total	132	10,786
Las Vegas	61	4977
Chicago	71	5809
Complaint-driven	N/A	1291
Routine	N/A	4518
Risk level[a]		
High (% of total)	84 (63.6%)	5702 (52.9%)
Medium (%)	39 (29.6%)	2325 (21.6%)
Low (%)	9 (6.8%)	2759 (25.6%)

[a]p value for difference in risk distribution between FINDER and BASELINE <0.001, from X^2-test

FINDER was deployed in Las Vegas between May and August 2016; during that period a total of 5038 inspections were completed, 61 of which were prompted by FINDER (Table 1). A similar deployment occurred in Chicago between November 2016 and March 2017, where 5880 inspections were completed, 71 of which were prompted by FINDER. Of the inspections not attributed to FINDER, 1291 inspections were driven by complaints through the existing systems in Chicago (Table 1).

RESULTS

Detection of unsafe restaurants

We assessed the accuracy of FINDER's predictions by comparing the fraction of unsafe restaurants it identified to the fraction of unsafe venues found in all the other restaurant inspections conducted during the experimentation period (BASELINE), as well as the fraction of unsafe venues found in the two subgroups, COMPLAINT and ROUTINE.

Of all the restaurants identified by FINDER, 52.3% were deemed unsafe upon inspection, compared to 24.7% for BASELINE restaurants (Table 2). We used binomial logistic regression to determine the odds ratio of being unsafe for restaurants in the FINDER and BASELINE groups. The former were 3.06 times (95% CI: 2.14–4.35) as likely to be unsafe as the latter, when accounting for restaurant risk level and city in our models ($p < 0.001$, Table 2). When stratified by restaurant risk level, FINDER restaurants were more likely to be designated unsafe across all risk designations, however the odds of being identified by FINDER as unsafe was higher in lower risk-level restaurants than in high risk-level restaurants (Table 2). Importantly, this suggests that a priori determination of the restaurant risk level might not necessarily reflect the true level of risk at the venue.

Comparison to complaint-based inspections

We did not examine complaint-based inspections from Las Vegas for two reasons. First, in that city complaints are handled differently from routine inspections in that complaints trigger a very focused investigation based on the nature of the complaint (as opposed to a comprehensive evaluation of food safety at the establishment, as in Chicago). Second, the transient nature of Las Vegas restaurant patrons, many of whom are visitors from elsewhere, means that the number of complaints received is very low, with only 15 complaints being reported during the experimental time period.

Therefore, we focused only on complaints from Chicago. We found that the overall rate of unsafe restaurants among those detected by FINDER in Chicago was 52.1%, whereas the rate of

Table 2. Ability of FINDER to detect unsafe restaurants as compared to BASELINE rate and with subcategories of the baseline inspections, including complaint-based inspections that occurred in Chicago and routine inspections from both Chicago and Las Vegas

	FINDER $n = 132$	BASELINE $n = 10,786$	Odds ratio[a] [95% CI]	*p*-value
Overall, number unsafe (%)	69 (52.3%)	2662 (24.7%)	3.06 [2.14–4.35]	<0.001
Risk level				
High, number unsafe (%)	42 (50.0%)	1909 (33.5%)	1.98 [1.28–3.05]	0.002
Medium, number unsafe (%)	23 (59.0%)	536 (23.1%)	5.50 [2.83–10.72]	<0.001
Low, number unsafe (%)	4 (44.4%)	217 (7.9%)	7.35 [1.79–30.13]	0.006
Comparison of FINDER to complaint-based inspections				
	FINDER ***n*** $= 71$	**COMPLAINT** ***n*** $= 1291$		
Overall, number unsafe (%)	37 (52.1%)	508 (39.4%)	1.68 [1.04–2.71]	0.03
Risk level				
High, number unsafe (%)	27 (47.4%)	374 (39.4%)	1.38 [0.81–2.36]	0.24
Medium, number unsafe (%)	9 (75.0%)	115 (39.3%)	4.64 [1.23–17.51]	0.02
Low, number unsafe (%)	1 (50.0%)	19 (38.8%)	1.58 [0.09–26.78]	0.75
Comparison of FINDER to routine inspections				
	FINDER ***n*** $= 132$	**ROUTINE** ***n*** $= 9495$		
Overall, number unsafe (%)	69 (52.3%)	2,154 (22.7%)	3.16 [2.22–4.51]	<0.001
Risk level				
High, number unsafe (%)	42 (50.0%)	1531 (32.2%)	2.07 [1.35–3.20]	0.001
Medium, number unsafe (%)	23 (59.0%)	424 (20.9%)	5.52 [2.84–10.76]	<0.001
Low, number unsafe (%)	4 (44.4%)	199 (7.3%)	7.65 [1.90–30.89]	0.004

[a]Odds ratios from binomial logistic regressions

unsafe restaurants in COMPLAINT inspections was 39.4% (Table 2). Adjusting for venue risk level, we found that across all restaurants, the odds ratio that a FINDER restaurant is unsafe was 1.68 times (95% CI: 1.04–2.71) as high as COMPLAINT inspections ($p = 0.03$, Table 2). Across all restaurant risk levels, FINDER restaurants were more likely to be given an unsafe designation than COMPLAINT restaurants (Table 2).

Comparison to routine inspections

Finally, we compared the precision of FINDER to that of ROUTINE inspections (in both cities), where a venue gets inspected every 6–24 months depending on jurisdiction. The overall rate of unsafe restaurants detected by FINDER was 52.3%, whereas the overall rate of detection of unsafe restaurants in routine inspections was 22.7% (Table 2). Using a binomial logistic regression adjusting for city and risk level, we found FINDER restaurants to be 3.16 times as likely to be unsafe as ROUTINE restaurants (95% CI: 2.22–4.51). FINDER restaurants were more likely to be designated unsafe than ROUTINE restaurants across all risk-level classifications (Table 2).

FINDER has several advantages over the existing inspection mechanisms. Compared to routine inspections, FINDER has a much higher precision rate of identifying unsafe restaurants, and it can discover health violations that might not be found by traditional protocols. Compared to complaint-based inspections, FINDER still has a greater ability to identify restaurants with significant health code violations and is universal, whereas complaints are fairly scarce (in Chicago, only 22% of inspections were based on complaints). Additionally, as we show below, complaints are often misguided as they attribute illness to the wrong venue.

Table 3. Violation counts

	FINDER[a] $n = 132$	BASELINE[a] $n = 5848$	*p*-value
Critical violations	0.40	0.21	0.001
Major violations	0.74	0.56	0.04

[a]Adjusted mean violation count, accounting for city and risk level, calculated using linear regressions

Detection of violations

We next examined whether restaurants identified by FINDER are likely to have more serious safety violations compared to those in the BASELINE group. In both cities, we obtained the number of violations identified in each restaurant inspection. We examined the severity of the violations, and focused on the critical and major violations (see Supplementary Tables S1 and S2 for full list of violations). We used a linear regression model that adjusted for city and restaurant risk level to calculate an adjusted mean number of critical and major violations for FINDER and for BASELINE restaurants. FINDER-identified restaurants had a greater number of critical violations (0.40 vs 0.21, $p = 0.001$, Table 3) and major violations (0.74 vs 0.56, $p = 0.04$, Table 3) than BASELINE restaurants.

Location attribution

Finally, we found that FINDER can better attribute the location of foodborne illness to a specific venue than individual reports from customers generally do. For restaurants identified by FINDER, we focused on the customers who later searched for terms indicative of foodborne illness, and then analyzed their entire sequence of prior restaurant visits.

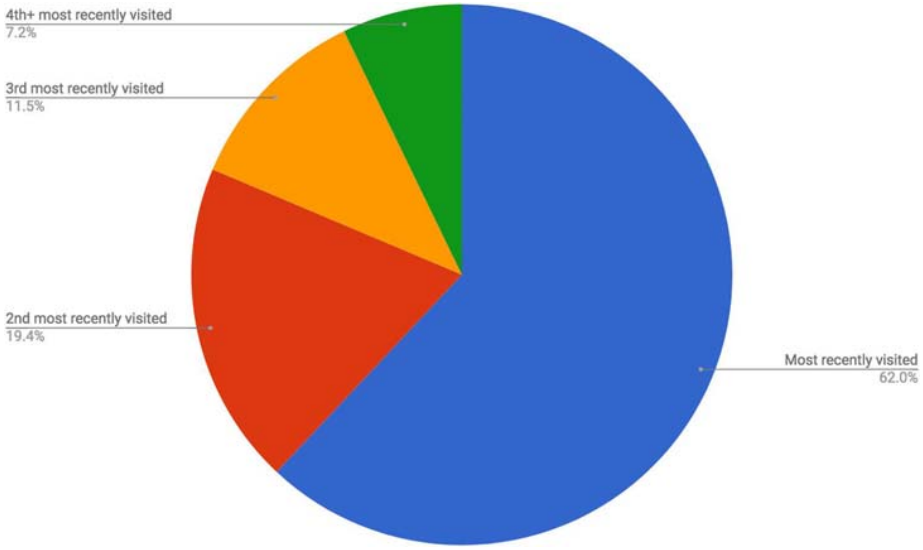

Fig. 1 Frequency with which illness can be attributed to recently visited restaurants, among FINDER restaurants. $N = 132$

Among all restaurant visits that FINDER associated with a foodborne illness, users appear to have contracted the illness at the restaurant they visited most recently 62% of the time (Fig. 1). However, in the other 38% of cases, their illness was likely caused by another restaurant, which they had visited earlier, given the relative signal strength of the latter restaurant. Specifically, for 19.4% of users, this was the penultimate restaurant visited, for 11.5% it was the third to last restaurant visited, and for 7.2% it was the fourth to last or even an earlier visited restaurant. Previous research shows that people tend to blame the last restaurant visited, and therefore may be likely to file a complaint for the wrong restaurant.[14,15] The FINDER approach is more robust than individual customer complaints, as it aggregates information from numerous people who visited the venue.

DISCUSSION

After deploying FINDER in two major US cities, we found that FINDER can more precisely identify restaurants with significant health code issues than traditional methods for selecting restaurants for inspection, and with more precision than even complaint-based inspections. Importantly, we found that complaint-based inspections may often be mistargeted. Our findings suggest that large-scale real-time monitoring systems offer a promising way to bolster food inspection efforts and reduce foodborne illness in a large population.

FINDER addresses many gaps that currently exist in this type of syndromic surveillance. First, many syndromic surveillance technologies do not have the capability to geographically pinpoint the specific location or venue where signal is originating from. Even complex systems, such as HealthMap, focus on broader geographic districts.[16] FINDER, on the other hand, is able to use not only real-time geographic location, but also can access recent historical locations to better localize the signal to the most likely epicenter (in FINDER's case, a specific restaurant), rather than to a location where the infection was recorded (e.g., hospital address where patient was treated). Furthermore, thanks to its use of anonymized logs data, FINDER is not subject to patrons' recall bias, which is present in most other systems.

Additionally, many syndromic data surveillance signals are difficult to validate.[3] The accuracy of most disease prediction modeling using online data is evaluated using aggregated past observations,[11,17,18] with the notable exception of nEmesis, a system that used geo-tagged public Twitter messages to detect foodborne illness clusters on a small scale.[12] In contrast, we were able to validate our model through actual health inspections following a standard professional protocol. Notably, we found that our model can more precisely identify restaurants with food safety violations than the system in Chicago, which has one of the most advanced monitoring programs in the nation as it employs social media mining and illness prediction technologies to target their inspections.[19]

Web search queries and online big data have been used before in public health research, most notably in Google Flu Trends.[20–25] The latter model tracked the proportion of 45 manually selected queries over all queries from a given region. These queries were not machine learned and therefore the model was potentially more susceptible to drift and noise over time.[26] In contrast to Google Flu Trends, FINDER uses machine learning to identify the infinite variety of ways in which symptoms of foodborne illness can be described in natural language. Our Web Search Model (WSM, explained in Methods) further improves the understanding of individual queries using search results returned for them. Moreover, Google Flu Trends estimated query volume rather than user volume as we do in this work. These factors together allow us to more reliably estimate incidence rates in a robust and accurate way.

Our study is not without limitations. Specifically, we used data from Google search users, which is a subset of the entire population. However, there is nothing unique to Google in our approach, and other search engines that have location history can create similar algorithms and likely achieve comparable results. Second, although FINDER has a high positive predictive value, it did not detect all the venues with violations flagged through the traditional complaint-driven channels. This is due, in part, to the relatively small number of FINDER restaurants inspected, owing to the limited bandwidth provided to us by city/county health departments, which restricted the number of inspections FINDER could suggest in a given city. To this end, we applied an arbitrary cutoff of signal strength to identify problematic restaurants to send to county health officials, which resulted in a small sample size given time and resource constraints. However, we are able to rank the relative risk of all restaurants in a city, and thus can provide more substantial lists of problematic restaurants to cities in the future to further aid in prioritization of inspections.

Furthermore, while the model will continue to improve to better detect restaurants with health code violations, there is clear evidence that FINDER is best used as a supplement to other methods that cities use but is not yet ready to replace the broader inspection scheme. We further observe that by law every restaurant has to be inspected once or twice a year (depending on the jurisdiction), and FINDER augments traditional inspection mechanisms by suggesting good times to perform the inspections (when the risk of foodborne illness at a venue is high).

Admittedly, the implementation of FINDER does incur some costs for city or county health departments that implement it, in terms of personnel time spent working with and responding to the signal. However, these costs should be considered in the context of cities already having inspectors visiting restaurants, most of which do not have a problem (i.e., higher false positive rate) and if FINDER is able to help cities prioritize inspections, it can be more efficient. It should also be noted that while FINDER does increase the overall accuracy with which county health departments are able to identify restaurants with serious health code violations, there were times when FINDER's predictions were not accurate, and thus inspectors were sent to inspect the restaurant but did not find serious safety issues. This may raise concerns about allocating inspection resources when FINDER predictions are incorrect. Many times, the FINDER-prompted inspection was the first health department inspection of the year for the restaurant. This means that even if it were a misclassification, the visit itself allowed the health department to meet the legal mandate of an inspection for the year. By law, every restaurant has to be inspected once or twice a year (depending on the jurisdiction). Thus, FINDER's moving up the inspection timeline did not require the use of any additional resources. Redundancy or waste issues only arise when FINDER misclassifies a restaurant that has already been inspected. In these cases, individual health departments may choose to shift the priority of restaurants that have already met their inspection requirement.

Overall, the costs of deploying FINDER should be weighed against the costs of foodborne illnesses that would be or continue to be missed. Anecdotally, both Chicago and Las Vegas reported that incorporating FINDER into their current systems required some upfront time and resources, but that soon thereafter, it did not require much additional effort to maintain, and provided valuable insight into inspection priorities.

In conclusion, we found that FINDER can be integrated into existing inspection protocols quickly and at very low financial costs. If deployed broadly, FINDER can potentially be an important part of a national effort to reduce the burden of foodborne illness. Once the model is widely deployed, the feedback from actual inspections can be used as additional training data to further improve the model.

METHODS

Experimental design

FINDER is a machine-learned model for real-time foodborne illness detection. To determine the ability of FINDER to detect potentially unsafe restaurants, we introduced FINDER into two local health departments in Chicago and Las Vegas. In each city, FINDER-identified restaurants were inspected following the same protocol used in other restaurant inspections. The results of the FINDER inspections were then compared to the overall baseline inspection results, as well as to two subsets of baseline inspections, complaint-based inspections, and routine inspections that are conducted at certain time intervals.

Analyses were further stratified by restaurant risk level. Both Chicago and Las Vegas designate risk levels for all food establishments, based on the type of establishment and level of food preparation. In each city, these risk categories included low risk (restaurant only handles and serves ready-to-eat ingredients), medium risk (restaurant cooks raw food for same-day service), or high risk (restaurant cooks, cools, and then reheats food on a later date). Of all FINDER-identified restaurants across both cities, 84 (63.6%) were high risk, 39 (29.6%) were medium risk, and 9 (6.8%) were low risk. Of all the other inspected restaurants (the BASELINE set), 6225 (53.2%) were high risk, 2532 (21.5%) were medium risk, and 2967 (25.2%) were low risk (Table 1).

Components of FINDER

FINDER estimates restaurant-level incidence rate of foodborne illness from web search and location data. It does so in a scalable and privacy-preserving way using two components: the web search model (WSM) identifies search queries about foodborne illness, and the location model (LM) identifies which restaurants have been visited by the relevant users. FINDER aggregates data at the restaurant level, and computes the proportion of users who visited each restaurant and later showed evidence of foodborne illness in their searches. We explain each step of this process in detail below.

Web search model (WSM)

We developed a log-linear maximum entropy model that estimates, for an anonymized search query, the probability that the query is about foodborne illness. WSM training happens in a supervised way from automatically inferred labels. This allows us to deploy the model at scale and avoid relying on human raters, which can be very costly, and also allows us to maintain user privacy, as no live query is analyzed by humans.

In order to be able to automatically label training example queries, we focus on web pages about foodborne illness (broadly defined, including pertinent treatments and symptoms). We identify relevant web pages as those where concepts related to foodborne illness are prominently mentioned (this can be done using standard text classification techniques, which identify concept mentions in web pages).[27] Examples of such pages are the Wikipedia article about foodborne illness or the CDC web site devoted to foodborne illness. We observe that queries that lead to significant time spent on such pages are likely to truly be about foodborne illness, which allows us to label queries automatically. Anchoring on web pages allows us to regularize over the noise in individual queries, which—unlike pages—tend to be short, ambiguous, and often ungrammatical. The training pipeline automatically aggregates queries leading to relevant web sites, and uses them as positive examples. Then, it randomly samples other queries from the search stream to serve as negative examples. The WSM model is trained in a supervised way using these two (automatically labeled) sets of queries. The resulting model estimates the probability that a query is used for online research about foodborne illness (producing a score between 0 and 1 for each query), and does not require any human effort or inspection.

The model has a feature space of 50,000 dimensions, and leverages feature hashing for compactness. The features consist of word unigrams and bigrams extracted from the query string, as well as from the search result URLs, snippets (short summaries of each result displayed by the search engine), and web page titles. We also construct features based on Knowledge Graph[28] annotations of the concepts mentioned in the query.

Unlike much prior work,[12] FINDER estimates the actual incidence rate of foodborne illness in the population, rather than the overall query volume about it. That is, instead of computing the proportion of relevant search queries, FINDER computes the proportion of affected users. This distinction is important for two reasons. First, certain web users, such as medical professionals or academic researchers, may issue a significant number of pertinent queries, yet the plurality of their queries does not necessarily imply higher incidence of the disease. Second, focusing on users enables significantly better modeling of restaurant visits for users who opted in to use location history. In those cases, a user does not need to do anything specific at the restaurant to be included in the highly aggregated metrics. Prior work could only infer user's location if the user performed some online action (such as posting a Twitter message or doing a web search) at the venue or in the surrounding geographic area.[12,29] This requirement considerably limited the coverage of prior approaches, because only a minority of users actually take such a fortuitous action. FINDER does not have this constraint because it leverages ambient location that is collected in the background on mobile devices of opted-in users.

We applied the WSM query classifier to all English search queries in the United States to detect web searches related to foodborne illness, within an incubation period of 3 days after leaving a restaurant.

Validation of the web search model

We validated the WSM's capacity to detect queries about foodborne illness via evaluation with human raters. To enable FINDER to learn at scale, no human labels were used for model training—we only collected human judgements for a relatively small sample of queries for evaluation. Since queries are inherently noisy, even experts may have different opinions. Therefore, we pooled judgements from multiple independent raters to obtain a more accurate estimate of ground truth. During evaluation, we compare labels predicted by the query classifier to this ground truth. The training and evaluation sets are by design disjoint and all queries across both sets are unique.

We sampled 15,000 queries for the evaluation and collected a total of 90,000 judgements on them (six independent judgements per query). The natural distribution of queries in the search stream clearly has a strong class imbalance for our task, whereas there are many fewer positive examples (queries related to foodborne illness) than negative ones. To address the challenge posed by this class imbalance and cover the full spectrum of positive as well as negative queries with a bounded human labeling budget, we up-sampled positive examples but otherwise mimicked the overall query distribution in order to accurately assess the performance of WSM on live data. To this end, half of the evaluation queries were sampled using a high-recall filter (designed to catch most foodborne illness queries), and the other half sampled using simple traffic weighting, where queries are sampled according to their frequency in the overall query stream. For the high-recall filter, we leveraged clicks on web pages about foodborne illness (annotated with Knowledge Graph topics). Specifically, we collected a large set of queries that led to clicks on such topical web pages, and then sampled queries out of this set according to their traffic weight. All queries were anonymized and highly aggregated to preserve privacy.

We employed two types of human raters: non-medical professionals as well as licensed medical doctors (MDs), trained in various medical specialties and located in the United States. Raters in both groups were unknown to and independent of the authors. Additionally, the raters were not aware of this research and did not know the purpose of the task. They were engaged by a third-party provider, also independent of the authors, which ensured proper qualifications of the raters.

Three non-medical professionals and three MDs independently judged the relevance of each search query in our sample to foodborne illness. The inter-rater agreement, computed over all judgements collected from both groups and measured by Krippendorff's alpha was 0.8, indicating high agreement. We aggregated all ratings from the six raters (three MDs and three non-professionals) for each query using the majority vote. Ties were broken using the majority rule over MD votes. We found this combination of raters produced the most accurate query labels, since MDs—experts in clinical diagnosis—are complemented by web raters who have a deeper experience with how health-related information needs could be reflected in search queries.

For each of the 15,000 queries in our evaluation set, we used WSM to predict the probability that the query is indicative of foodborne illness. This probability was then evaluated against the ground truth labels obtained from human raters as described above. In this evaluation, WSM achieved ROC AUC of 0.85 and F1 score of 0.74, which suggests it has high precision as well as high recall in identifying queries indicative of food poisoning.

Location model (LM)

The location model (LM) connects the queries about foodborne illness, which were automatically extracted from web search logs, to restaurant visits extracted from location logs. The entire process is automated to preserve privacy, and the output signals are heavily aggregated. For each restaurant, FINDER estimates how many users visited it over the time period of interest. Next, FINDER uses WSM to compute the proportion of those visitors who searched for foodborne illness after the restaurant visit. This provides a probability estimate for a visitor to get infected within 3 days of visiting the restaurant. This period was selected based on the incubation periods of the most common foodborne illnesses,[9] as well as based on parameter optimization using historical inspection data. If a user visited more than one restaurant within that period, all visited restaurants were considered.

Thanks to aggregating data over numerous users, FINDER can confidently detect which restaurants are likely causing the illness, even though search and/or location evidence from any individual user may be ambiguous and noisy.

Maintaining user privacy

The work reported herein has been conducted in accordance with the Google Privacy Policy and Terms of Service. At the beginning of processing, queries and locations have been anonymized using anonymous identifiers. This allowed FINDER to count the number of users who have visited a restaurant and later showed evidence of foodborne illness in their searches, in a privacy-preserving way using a differential privacy mechanism. All the processing has been done automatically, including the labeling of training examples for query classification (both positive and negative examples), so that no live query was analyzed by humans.

Statistical analysis

To evaluate the ability of FINDER to detect unsafe restaurants as compared to BASELINE results, we used binomial logistic regression models with city and restaurant risk-level fixed effects to calculate odds ratios. We also used binomial logistic regression models to compare the performance of FINDER to COMPLAINT inspections and ROUTINE inspections. We used a linear regression model with city and restaurant risk-level fixed effects to calculate adjusted mean violation numbers. We used a multinomial logistic regression model to calculate relative risk ratios to compare the ability of FINDER to identify restaurants that received one of three grading results: Pass, Pass with Conditions, and Fail.

Code availability

FINDER code was built on top of MapReduce open source code (https://github.com/GoogleCloudPlatform/appengine-mapreduce); however, the restaurant classification code cannot be published at this time.

Data availability

The data that support the findings of this study were obtained from Google, Inc. and restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data may be available from authors upon reasonable request and with permission of Google, Inc.

ACKNOWLEDGEMENTS

We thank Andrei Broder, Gerrin Butler, Susan Cadrecha, Stephanie Cason, Claire Cui, Jeff Dean, Jason Freidenfelds, John Giannandrea, Bryant Gipson, Benedict Gomes, Chad Heilig, Vivien Hoang, Anjali Joshi, Onur Kucuktunc, Scott Lee, Arthur Liang, Arne Mauser, Yael Mayer, Bhaskar Mehta, Leslie Miller, Caitlin Niedermeyer, Mike Pearson, Alvin Rajkomar, Karthik Raman, Thomas Roessler, John Sarisky, Calvin Seto, Tomer Shekel, Johanna Shelton, Diane Tang, Balder ten Cate, Chandu Thota, Kent Walker, Lawrence You, and health department inspectors for their help and advice. Data for this paper were obtained from Google databases as well as publicly available data sets from the Southern Nevada Health District (https://southernnevadahealthdistrict.org/restaurants/inspections.php) and the Chicago Department of Public Health (https://data.cityofchicago.org/Health-Human-Services/Food-Inspections-Dashboard/2bnm-jnvb). This publication was supported by the Cooperative Agreement Number 1U01EH001301-01 funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

AUTHOR CONTRIBUTIONS

A.S., P.R., and E.G. conceived and implemented FINDER. A.S., L.D., M.B., R.M., T.S., P.R., and E.G. designed deployment of FINDER. L.D. and M.B. oversaw implementation of FINDER in Las Vegas. R.M and T.S. oversaw implementation of FINDER in Chicago. S.C. and A.K.J. analyzed data and performed statistical analysis. All authors contributed to writing the manuscript. A.S. and S.C. contributed equally to this manuscript and therefore are listed as co-first authors.

ADDITIONAL INFORMATION

Supplementary information accompanies the paper on the *npj Digital Medicine* website (https://doi.org/10.1038/s41746-018-0045-1).

Competing interests: A.S., P.R., and E.G. are directly employed by Google. The remaining authors declare no competing interests.

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Deploying nEmesis: Preventing Foodborne Illness by Data Mining Social Media

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■ *Foodborne illness afflicts 48 million people annually in the US alone. More than 128,000 are hospitalized and 3000 die from the infection. While preventable with proper food safety practices, the traditional restaurant inspection process has limited impact given the predictability and low frequency of inspections, and the dynamic nature of the kitchen environment. Despite this reality, the inspection process has remained largely unchanged for decades. CDC has even identified food safety as one of seven "winnable battles"; however, progress to date has been limited. In this work, we demonstrate significant improvements in food safety by marrying AI and the standard inspection process. We apply machine learning to Twitter data, develop a system that automatically detects venues likely to pose a public health hazard, and demonstrate its efficacy in the Las Vegas metropolitan area in a double-blind experiment conducted over three months in collaboration with Nevada's health department. By contrast, previous research in this domain has been limited to indirect correlative validation using only aggregate statistics. We show that the adaptive inspection process is 64 percent more effective at identifying problematic venues than the current state of the art. If fully deployed, our approach could prevent more than 9000 cases of foodborne illness and 557 hospitalizations annually in Las Vegas alone. Additionally, adaptive inspections result in unexpected benefits, including the identification of venues lacking permits, contagious kitchen staff, and fewer customer complaints filed with the Las Vegas health department.*

Since its inception, social media have been routinely data mined for marketing consumer goods. Starting around 2010, researchers began to realize that the same techniques could be used for influenza surveillance (Culotta 2010). Since then, social media analytics for public health has been expanded to monitor a variety of conditions, including cholera (Chunara, Andrews, and Brownstein 2012), mental health (Golder and Macy 2011), and diet (Widener and Li 2014). This body of work has shown that social media can be a useful complement to traditional methods, such as surveys of medical providers or individuals, for gathering aggregate public health statistics. Our work extends the social media analytics approach to a new domain, foodborne illness. Our most important contribution, however, is that we go beyond simply monitoring population-level prevalence. Our system, nEmesis, provides specific, actionable information, which is used to support effective public health interventions.

 ISSN 0738-4602

The fight against foodborne illness is complicated by the fact that many cases are not diagnosed or traced back to specific sources of contaminated food. In a typical US city, if a food establishment passes its routine inspection, it may not see the health department again for up to a year. Food establishments can roughly predict the timing of their next inspection and prepare for it. Furthermore, the kitchen environment is dynamic, and ordinary inspections merely provide a snapshot view. For example, the day after an inspection, a contagious cook or server could come to work or a refrigerator could break, either of which can lead to food poisoning. Unless the outbreak is massive, the illness is unlikely to be traced back to the venue.

CDC has identified food safety as one of seven "winnable battles,"[1] along with vehicle accidents and HIV, but progress to date on eradicating the disease has been limited. Our work adds to the arsenal of tools we as humanity can use to fight disease.

We present a novel method for detecting problematic venues quickly — before many people fall ill. We use the term *adaptive inspections* for prioritizing venues for inspection based on evidence mined from social media. Our system (nEmesis) applies machine learning to real-time Twitter data — a popular microblogging service where people post message updates (tweets) that are at most 140 characters long. A tweet sent from a smartphone is usually tagged with the user's precise GPS location. We infer the food venues each user visited by "snapping" his or her tweets to nearby establishments (figure 1). We develop and apply an automated language model that identifies Twitter users who indicate they suffer from foodborne illness in the text of their public online communication. As a result, for each venue, we can estimate the number of patrons who fell ill shortly after eating there. In this paper, we build on our prior work, where we showed a correlation between the number of "sick tweets" attributable to a restaurant and its historic health inspection score (Sadilek et al. 2013). In this paper, we deploy an improved version of the model and validate its predictions in a controlled experiment.

The Southern Nevada Health District (SNHD) conducted a three-month controlled experiment with nEmesis beginning January 2, 2015. Venues with the highest predicted risk on any given day were flagged and subsequently verified through a thorough inspection by an environmental health specialist. For each adaptive inspection, we perform a paired control inspection independent of the online data to ensure full annual coverage required by law and to compensate for the geographic bias of Twitter data. During the first three months, the environmental health specialists inspected 142 venues, half using nEmesis and half following the standard protocol. The latter set of inspections constitutes our control group. The inspectors were not told whether the venue comes from nEmesis or control.

nEmesis downloads and analyzes all tweets that originate from Las Vegas in real time. To estimate visits to restaurants, each tweet that is within 50 meters of a food venue is automatically "snapped" to the nearest one as determined by the Google Places API. We used Google Places to determine the locations of establishments because it includes latitude/longitude data that is more precise than the street address of licensed food venues. As we will see, this decision allowed nEmesis to find problems at unlicensed venues.

For this snapping process, we only consider tweets that include GPS coordinates. Cell phones determine their location through a combination of satellite GPS, WiFi access point fingerprinting, and cell-tower triangularization (Lane et al. 2010). Location accuracy typically ranges from 9 meters to 50 meters and is highest in areas with many cell towers and Wi-Fi access points. In such cases, even indoor localization (for example, within a mall) is accurate.

Once nEmesis snaps a user to a restaurant, it collects all of his or her tweets for the next five days, including tweets with no geo-tag and tweets sent from outside of Las Vegas. This is important because most restaurant patrons in Las Vegas are tourists, who may not show symptoms of illness until after they leave the city. nEmesis then analyzes the text of these tweets to estimate the probability that the user is suffering from foodborne illness.

Determining if a tweet indicates foodborne illness of the user is more complex than simply scanning for a short list of key words. By its nature, Twitter data is noisy. Even a seemingly explicit message, such as "I just threw up," is incomplete evidence that the author of the tweet has a foodborne illness. By using a language model rather than relying on individual key words, our method is able to better model the meaning behind the tweet and is therefore able to capture even subtle messages, such as "have to skip work tomorrow" or "I need to go to a pharmacy." Figure 1 lists the 20 most significant positive and negative language features that contribute to the score.

nEmesis then associates the individual sickness scores to the food venues from which the users originally tweeted. Each snapped twitter user is a proxy for an unknown number of patrons that visited but did not tweet. Since contracting foodborne illness and tweeting at the right times and places is a relatively rare occurrence, even a single ill individual can be a strong evidence of a problem. The web interface (figure 2) is used by the managing health specialist to sort venues by the number of sick users and to dispatch inspectors.

Figure 3 illustrates the full nEmesis process. On a typical day we collect approximately 15,900 geotagged tweets from 3600 users in the Las Vegas area. Approximately 1000 of these tweets, written by 600

Positive Feature		Negative Features	
Feature	**Weight**	**Feature**	**Weight**
stomach	1.7633	think i'm sick	– 0.8411
stomachache	1.2447	i feel soooo	– 0.7156
nausea	1.0935	f--k i'm	– 0.6393
tummy	1.0718	@ID sick to	– 0.6212
#upsetstomach	0.9423	sick of being	– 0.6022
nauseated	0.8702	ughhh cramps	– 0.5909
upset	0.8213	cramp	– 0.5867
naucious	0.7024	so sick omg	– 0.5749
ache	0.7006	tired of	– 0.5410
being sick man	0.6859	cold	– 0.5122
diarrhea	0.6789	burn sucks	– 0.5085
vomit	0.6719	course i'm sick	– 0.5014
@ID i'm getting	0.6424	ifi'm	– 0.4988
#tummyache	0.6422	is sick	– 0.4934
#stomachache	0.6408	so sick and	– 0.4904
i've never been	0.6353	omg i am	– 0.4862
threw up	0.6291	@LINK	– 0.4744
i'm sick great	0.6204	@ID sick	– 0.4704
poisoning	0.5879	if	– 0.4695
feel better tomorrow	0.5643	i feel better	– 0.4670

Figure 1. The Top 20 Most Significant Negatively and Positively Weighted Features in Our Language Model.

unique users, snap to a food venue. nEmesis then tracks these 600 users and downloads all their subsequent tweets for the following five days. These subsequent tracked tweets are then scored by the language model. Finally, venues are ranked based on the number of tweets with sickness score exceeding the threshold of 1.0 determined on a withheld validation set. During the experiment, nEmesis identified on average 12 new tweets per day that were strongly indicative of foodborne illness. Figure 4 shows a distribution over health scores inferred by nEmesis.

Significance of Results

To the best of our knowledge, this is the first study that directly tests the hypothesis that social media provide a signal for identifying specific sources of any disease through a controlled, double-blind experiment during a real-world deployment. By contrast, prior work has been anecdotal, limited to finding correlations, and/or didn't include a control group.

Related Work

Since the famous cholera study by John Snow (1855), much work has been done in capturing the mechanisms of epidemics. There is ample previous work in computational epidemiology on building relatively coarse-grained models of disease spread through differential equations and graph theory (Anderson and May 1979, Newman 2002), by harnessing simulated

Figure 2. nEmesis Web Interface.

The top window shows a portion of the list of food venues ranked by the number of tweeted illness self-reports by patrons. The bottom window provides a map of the selected venue, and allows the user to view the specific tweets that were classified as illness self-reports.

populations (Eubank et al. 2004), and by analysis of official statistics (Grenfell, Bjornstad, and Kappey 2001). Such models are typically developed for the purposes of assessing the impact a particular combination of an outbreak and a containment strategy would have on humanity or ecology (Chen, David, and Kempe 2010).

However, the above works focus on aggregate or simulated populations. By contrast, we address the problem of predicting the health of real-world populations composed of individuals embedded in a social structure and geo-located on a map.

Most prior work on using data about users' online behavior has estimated aggregate disease trends in a large geographical area, typically at the level of a state or large city. Researchers have examined influenza tracking (Culotta 2010; Achrekar et al. 2012; Sadilek and Kautz 2013; Broniatowski and Dredze 2013; Brennan, Sadilek, and Kautz 2013), mental health and depression (Golder and Macy 2011; De Choudhury et al. 2013), as well as general public health across a broad range of diseases (Brownstein, Freifeld, and Madoff 2009; Paul and Dredze 2011b).

Some researchers have begun modeling health and contagion of specific individuals by leveraging fine-grained online social and web search data (Ugander et al. 2012; White and Horvitz 2008; De Choudhury et al. 2013). For example, in Sadilek, Kautz, and Silenzio (2012) we showed that Twitter users exhibiting symptoms of influenza can be accurately detected using a model of language of Twitter posts. A detailed epidemiological model can be subsequently built by following the interactions between sick and healthy individuals in a population, where physical encounters are estimated by spatiotemporal colocated tweets.

Our earlier work on nEmesis (Sadilek et al. 2013) scored restaurants in New York City by their number of sick tweets using an initial version of the language model described here. We showed a weak but significant correlation between the scores and published NYC Department of Health inspection scores. Although the data came from the same year, many months typically separated the inspections and the tweets.

Other researchers have recently tried to use Yelp restaurant reviews to identify restaurants that should be inspected (Harrison et al. 2014). Key words were used to filter 294,000 Yelp reviews for New York City to 893 possible reports of illness. These were manually screened and resulted in the identification of 3 problematic restaurants.

Background: Foodborne Illness

Foodborne illness, known colloquially as food poisoning, is any illness that results from the consumption of contaminated food, pathogenic bacteria, viruses, or parasites that contaminate food, as well as the consumption of chemical or natural toxins such as poisonous mushrooms. The US Centers for Disease Control and Prevention (CDC) estimates that 47.8 million Americans (roughly 1 in 6 people) are sickened each year by foodborne disease. Of that total, nearly 128,000 people are hospitalized, while just over 3000 die of foodborne diseases (CDC 2013).

CDC classifies cases of foodborne illness according to whether they are caused by one of 31 known foodborne illness pathogens or by unspecified agents. These 31 known pathogens account for 9.4 million (20 percent of the total) cases of food poisoning each year, while the remaining 38.4 million cases (80 percent of the total) are caused by unspecified agents.

Food poisoning episodes associated with these 31 known pathogens account for an estimated 44 percent of all hospitalizations resulting from foodborne illness, as well as 44 percent of the deaths. Of these 31 known pathogens, the top five (*Norovirus*, *Salmonella*, *Clostridium perfringens*, *Campylobacter* species, and *Staphylococcus aureus*) account for 91 percent of the cases of foodborne illness, 88 percent of the cases that require hospitalization, and 88 percent of the cases that result in death. The economic burden of health losses resulting from foodborne illness are staggering. One recent study estimated the aggregated costs in the United States alone to be $77.7 billion annually (Scharff 2012).

Despite the variability in the underlying etiology of foodborne illness, the signs and symptoms of disease overlap considerably. The most common symptoms include vomiting, diarrhea (occasionally bloody), abdominal pain, fever, and chills. These symptoms can be mild to serious, and may last from hours to several days. Some pathogens can also cause symptoms of the nervous system, including headache, numbness or tingling, blurry vision, weakness, dizziness, and even paralysis. The gastrointestinal fluid losses can commonly result in dehydration, leading to secondary symptoms such as excessive thirst, infrequent urination, dark-colored urine, lethargy, and lightheadedness. Typically, symptoms appear within hours, but may also occur days to even weeks after exposure to the pathogen (Morris and Potter 2013). According to the US Food and Drug Administration (FDA), the vast majority of these symptoms will occur within three days (FDA 2012).

Public health authorities use an array of surveillance systems to monitor foodborne illness. In the United States, the CDC relies heavily on data from state and local health agencies, as well as more recent systems such as sentinel surveillance systems and national laboratory networks, which help improve the quality and timeliness of data (CDC 2013). An example of the many systems in use by CDC would include the Foodborne Diseases Active Surveillance Network, referred to as FoodNet. FoodNet is a sentinel surveillance system using information provided from sites in 10 states, covering about 15 percent of the US population, to monitor illnesses caused by seven bacteria or two parasites commonly transmitted through food. Other systems include the National Antimicrobial Resistance Monitoring System (NARMS), the National Electronic Norovirus Outbreak Network (CaliciNet), and the National Molecular Subtyping Network for Foodborne Disease Surveillance (PulseNet), among many others.

A major challenge in monitoring foodborne illness is in capturing actionable data in real time. Like all disease surveillance programs, each of the systems currently in use by CDC to monitor foodborne illness can entail significant time lags between when cases are identified and the data is analyzed and reported.

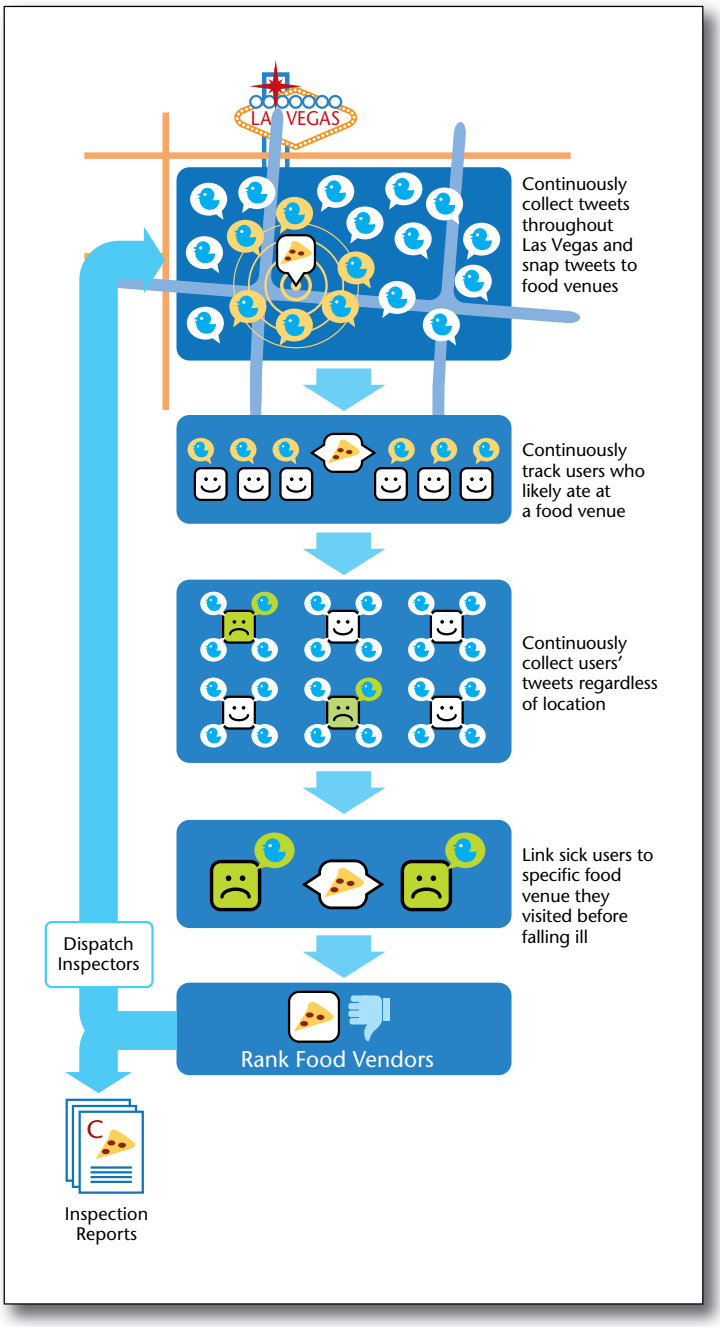

Figure 3. Adaptive Inspection Process.

Starting from the top: All tweets geo-tagged in the Las Vegas area are collected. Tweets geo-tagged within 50 meters of a food venue are snapped to that venue, and the Twitter IDs of the users are added to a database of users to be tracked. All tweets of tracked users are collected for the next five days, whether or not the users remain in Las Vegas. These tweets are evaluated by the language model to determine which are self-reports of symptoms of foodborne illness. Venues are ranked according to the number of patrons who later reported symptoms. Health department officials use the nEmesis web interface to select restaurants for inspection. Inspectors are dispatched to the chosen restaurants, and findings reported.

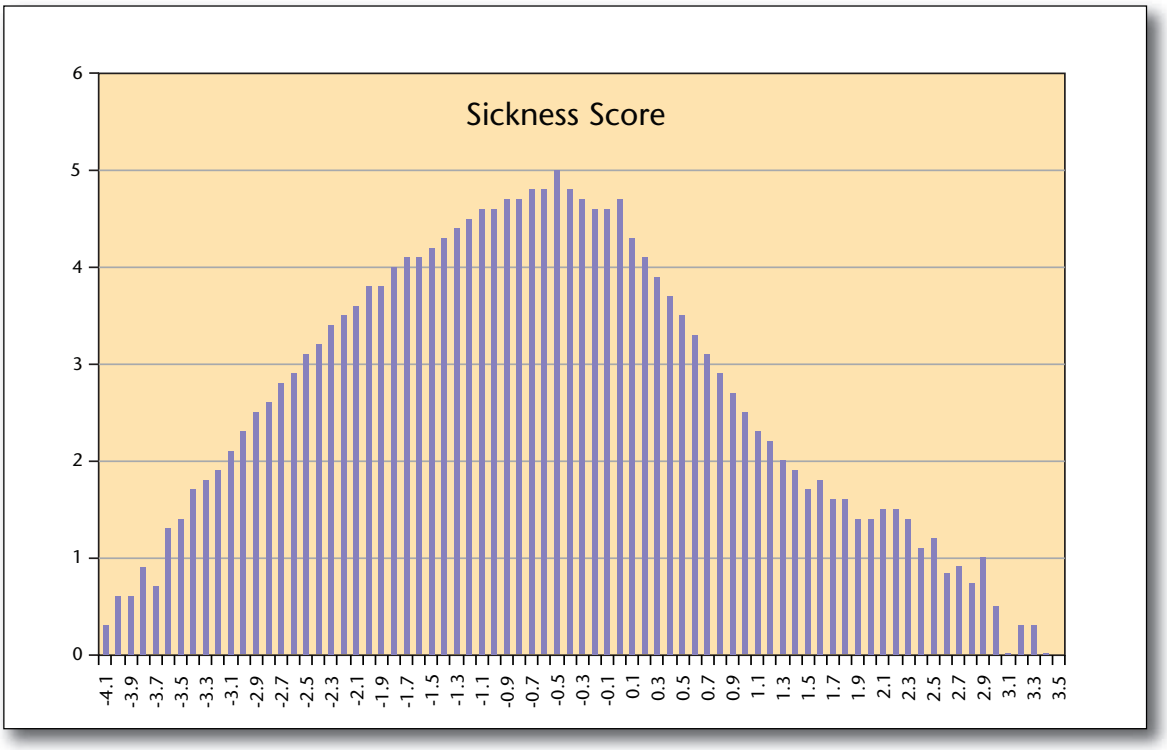

Figure 4. Distribution of Inferred Health Scores (Horizontal Axis) for One Week's Worth of Tweets.

The vertical axis shows the common logarithm of the number of messages with a particular health score. Higher scores indicate increased probability of being sick. Note that a tiny proportion of tweets (scores larger than 1.0) confidently show a foodborne illness.

Whereas this is not as important a limitation in terms of epidemiological surveillance, using surveillance data to actively intervene in outbreaks of foodborne illnesses can be challenging when surveillance data may not infrequently identify cases after the window of opportunity needed to prevent additional cases (Heymann 2004).

Methods

There are three general types of restaurant inspections conducted by health departments. First, restaurants are inspected prior to receiving a permit to ensure that the facility is designed and constructed in a way that allows food to be handled, prepared, and served in a safe manner. For example, inspections would ensure that food contact surfaces were durable and able to be easily cleaned, backflow prevention devices were installed in the plumbing system, and that commercial-grade appliances were installed. Once this type of inspection is completed for a facility, it would not be conducted again unless the facility was renovated.

The second, and most common, type of inspections are routine inspections. Routine inspections are not driven by the occurrence of problems, but are conducted periodically to prevent foodborne illness by ensuring that the facility is operating in accordance with good food-handling practices. Nevada law requires that these types of inspections happen at least annually. A routine inspection is a risk-based process addressing a food establishment's control over the five areas of risk for foodborne illness: personal hygiene, approved food source, proper cooking temperatures, proper holding times and temperatures, and sources of contamination.

A third type of inspection is a complaint-driven inspection initiated by either consumer complaints or the identification of a foodborne illness occurrence that may be associated with the facility. These inspections have a narrow focus but look in depth at a problem. For example, an inspection based on a complaint of improper handwashing at a restaurant would result in the inspector evaluating the handwashing facilities (that is, the availability of hand sinks, hot water, soap, and paper towels) and observing employees as they wash their hands, but would not result in a complete inspection of the facilities. If the inspection were related to foodborne illness, the

inspection would focus on the preparation of the particular foods consumed and the risk factors for the contamination, proliferation or amplification, and survival of the causative organism. This type of inspection is reactive in nature, and while it may prevent additional disease, problems in the facility have already occurred. The ultimate goal of all of these types of inspections is to prevent foodborne illness. Historically, there has been no way to easily identify restaurants having a decline in food handling practices and easily prevent illness, as inspections are based largely on the elapsed time from a previous inspection. As a result, these types of inspections represent the bulk of inspection activities but tend to be rather inefficient in identifying problem facilities. Complaint-driven inspections, while important, identify the problems after they have occurred, which is too late to prevent disease. More importantly, foodborne illnesses are frequently underdiagnosed and underreported (Scallan et al. 2011), preventing public health officials from identifying the source of illness for most foodborne infections.

Clark County, Nevada, is home to more than 2 million people and hosts over 41 million annual visitors to the Las Vegas metropolitan area. The Southern Nevada Health District (SNHD) is the governmental agency responsible for all public health matters within the county and is among the largest local health departments in the United States by population served. In 2014, SNHD conducted 35,855 food inspections (of all types) in nearly 16,000 permitted facilities. In Southern Nevada, inspection violations are weighted based on their likelihood to directly cause a foodborne illness and are divided into critical violations at 5 demerits each (for example, food handlers not washing hands between handling raw food and ready to eat food), to major violations at 3 demerits each (hand sink not stocked with soap), to good food management practices with no demerit value (leak at the hand sink). Demerits are converted to letter grades, where 0–10 is an A, 11–20 is a B, 21–39 is a C, and 40+ is an F (immediate closure). A repeated violation of a critical or major item causes the letter grade to drop to the next lower rank. A grade of C or F represents a serious health hazard.

Controlled Experiment: Adaptive Inspections

During the experiment, when a food establishment was flagged by nEmesis in an inspector's area, he was instructed to conduct a standard, routine inspection on both the flagged facility (adaptive inspection) and also a provided control facility (routine inspection). Control facilities were selected according to their location, size, cuisine, and their permit type to pair the facilities as closely as possible. The inspector was blind as to which facility was which, and each facility received the same risk-based inspection as the other.

Labeling Data at Scale

To scale the laborious process of labeling training data for our language model, we turn to Amazon's Mechanical Turk.[2] Mechanical Turk allows requesters to harness the power of the crowd in order to complete a set of human intelligence tasks (HITs). These HITs are then completed online by hired workers (Mason and Suri 2012).

We formulated the task as a series of short surveys, each 25 tweets in length. For each tweet, we ask "Do you think the author of this tweet has an upset stomach today?" There are three possible responses ("Yes," "No," "Can't tell"), out of which a worker has to choose exactly one (figure 5). We paid the workers 1 cent for every tweet evaluated, making each survey 25 cents in total. Each worker was allowed to label a given tweet only once. The order of tweets was randomized. Each survey was completed by exactly five workers independently. This redundancy was added to reduce the effect of workers who might give erroneous or outright malicious responses. Inter-annotator agreement measured by Cohen's κ is 0.6, considered a moderate to substantial agreement in the literature (Landis and Koch 1977). Responses from workers who exhibit consistently low annotator agreement with the majority were eliminated.

Workers were paid for their efforts only after we were reasonably sure their responses were sincere based on inter-annotator agreement. For each tweet, we calculate the final label by adding up the five constituent labels provided by the workers (Yes = 1, No = –1, Can't tell = 0). In the event of a tie (0 score), we consider the tweet healthy in order to obtain a high-precision data set.

Designing HITs to elicit optimal responses from workers is a difficult problem (Mason and Suri 2012). Pricing HITs poorly can lead to workers not even considering a task; HITs that are too long can cause worker attrition, poorly or ambiguously worded HITs will lead to noisy data. Worker satisfaction is also an important "latent" factor, which should not be taken lightly. Many Mechanical Turk workers are members of communities that offer requester reviews, very similar to Amazon's product review system. As a result, requesters who are unresponsive or opportunistic will soon find it hard to get any HIT completed.

Given that tweets indicating foodborne illness are relatively rare, learning a robust language model poses considerable challenges (Japkowicz et al. 2000; Chawla, Japkowicz, and Kotcz 2004). This problem is called class imbalance and complicates virtually all machine learning. In the world of classification, models induced in a skewed setting tend to simply label all data as members of the majority class. The problem is compounded by the fact that the minority class members (sick tweets) are often of greater interest than the majority class.

We overcome class imbalance faced by nEmesis

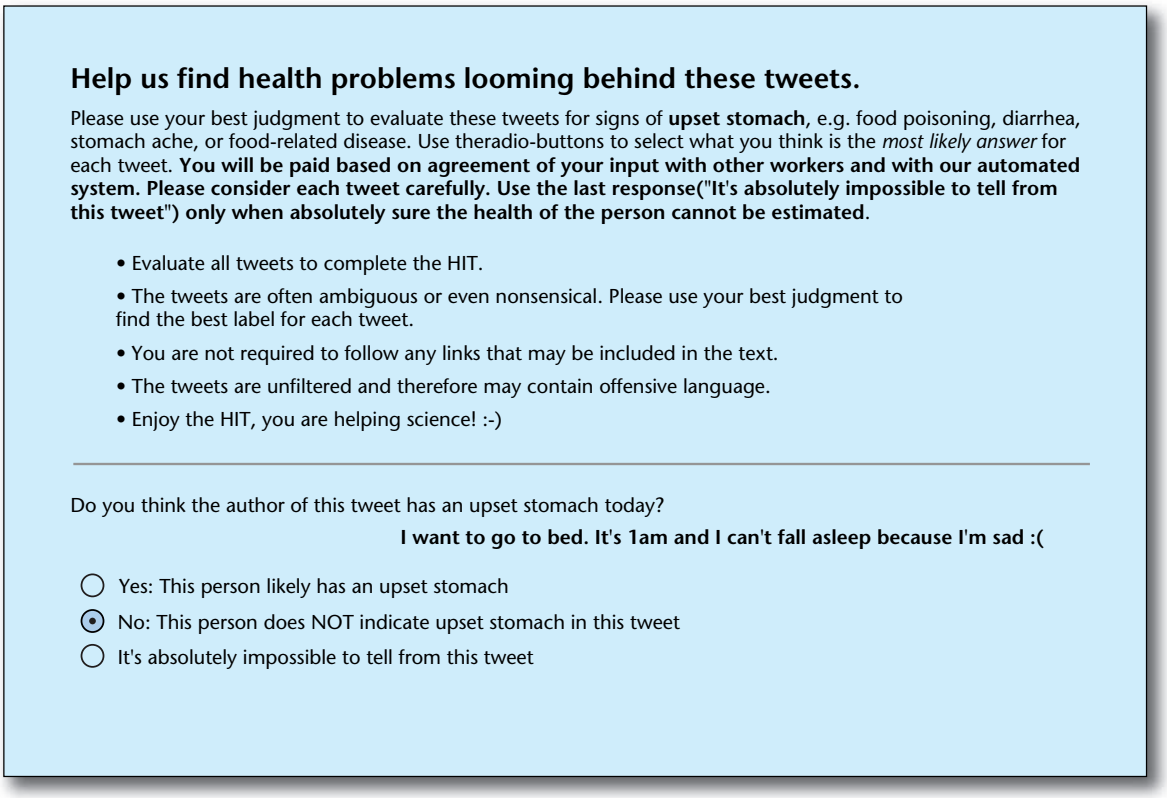

Figure 5. Example of a Mechanical Turk Task.

In this task, online workers are asked to label a given tweet. While tweets are often ambiguous, we encouraged workers to use their best judgment and try to polarize their answers. We found that when workers are presented with too many options, they tend to select "Can't tell" even when the text contains a strong evidence of illness.

through a combination of two techniques: human guided active learning, and learning a language model that is robust under class imbalance. We cover the first technique in this section and discuss the language model induction in the following section.

Previous research has shown that under extreme class imbalance, simply finding examples of the minority class and providing them to the model at learning time significantly improves the resulting model quality and reduces human labeling cost (Attenberg and Provost 2010). In this work, we leverage human guided machine learning — a novel learning method that considerably reduces the amount of human effort required to reach any given level of model quality, even when the number of negatives is many orders of magnitude larger than the number of positives (Sadilek et al. 2013). In our domain, the ratio of sick to healthy tweets is roughly 1 : 2500.

In each human guided learning iteration, nEmesis samples representative and informative examples to be sent for human review. As the focus is on the minority class examples, we sample 90 percent of tweets for a given labeling batch from the top 10 percent of the most likely sick tweets (as predicted by our language model). The remaining 10 percent is sampled uniformly at random to increase diversity. We use the HITs described above to obtain the labeled data.

In parallel with this automated process, we hire workers to actively find examples of tweets in which the author indicates he or she has an upset stomach. We asked them to paste a direct link to each tweet they find into a text box. Workers received a base pay of 10 cents for accepting the task, and were motivated by a bonus of 10 cents for each unique relevant tweet they provided. Each wrong tweet resulted in a 10 cent deduction from the current bonus balance of a worker. Tweets judged to be too ambiguous were neither penalized nor rewarded. Overall, we have posted 50 HITs that resulted in 1971 submitted tweets (mean of 39.4 per worker). Removing duplicates yielded 1176 unique tweets.

As a result, we employ human workers that "guide" the classifier induction by correcting the system when it makes erroneous predictions, and proactively seek-

ing and labeling examples of the minority classes. Thus, people and machines work together to create better models faster. This combination of human guided learning and active learning in a loop with a machine model has been shown to lead to significantly improved model quality (Sadilek et al. 2013).

In a postmortem, we have manually verified submitted tweets and 97 percent were correct sick tweets. This verification step could also be crowdsourced. Since searching for relevant tweets is significantly more time consuming than simply deciding if a given tweet contains a good example of sickness, future work could explore multitiered architecture, where a small number of workers acting as "supervisors" verify data provided by a larger population of "assistants." Supervisors as well as assistants would collaborate with an automated model, such as the support vector machine (SVM) classifier described in this paper, to perform search and verification tasks.

Language Model

Harnessing human and machine intelligence in a unified way, we develop an automated language model that detects individuals who likely suffer from a foodborne disease, on the basis of their online Twitter communication.

Support vector machines are an established method for classifying high-dimensional data (Cortes and Vapnik 1995). We train a linear binary SVM by finding a hyperplane with the maximal margin separating the positive and negative data points. Class imbalance, where the number of examples in one class is dramatically larger than in the other class, complicates virtually all machine learning. For SVMs, prior work has shown that transforming the optimization problem from the space of individual data points to one over pairs of examples yields significantly more robust results (Joachims 2005).

We use the trained SVM language model to predict how likely each tweet indicates foodborne illness. The model is trained on 8000 tweets, each independently labeled by five human annotators as described above. As features, the SVM uses all uni-gram, bi-gram, and tri-gram word tokens that appear in the training data at least twice. For example, a tweet "My tummy hurts" is represented by the following feature vector:

{my, tummy, hurts, my tummy, tummy hurts, my tummy hurts}

Prior to tokenization, we convert all text to lower case and strip punctuation. Additionally, we replace mentions of user identifiers (the "@" tag) with a special @ID token, and all web links with a @LINK token. We do keep hashtags (such as #upsetstomach), as those are often relevant to the author's health state, and are particularly useful for disambiguation of short or ill-formed messages.

Training the model associates a real-valued weight to each feature. The score the model assigns to a new tweet is the sum of the weights of the features that appear in its text. There are more than 1 million features; figure 2 lists the 20 most significant positive and negative features. While tweets indicating illness are sparse and our feature space has a very high dimensionality, with many possibly irrelevant features, support vector machines with a linear kernel have been shown to perform very well under such circumstances (Joachims 2006, Sculley et al. 2011, Paul and Dredze 2011a). Evaluation of the language on a held-out test set of 10,000 tweets shows 0.75 precision and 0.96 recall. The high recall is critical because evidence of illness is very scarce.

System Architecture

nEmesis consists of several modules that are depicted at a high-level in figure 3. Here we describe the architecture in more detail. We implemented the entire system in Python, with NoSQL data store running on Google Cloud Platform. Most of the code base implements data download, cleanup, filtering, snapping (for example, "at a restaurant"), and labeling ("sick" or "healthy"). There is also a considerable model-learning component described in the previous two sections.

Downloader

This module runs continuously and asynchronously with other modules, downloading all geo-coded tweets based upon the bounding box defined for the Las Vegas Metro area. These tweets are then persisted to a local database in JSON format.

Tracker

For each unique Twitter user that tweets within the bounding box, this module continues to download all of their tweets for two weeks, independent of location (also using the official Twitter API). These tweets are also persisted to local storage in JSON format.

Snapper

The responsibility of this module is to identify Las Vegas area tweets that are geo-coded within 50 meters of a food establishment. It leverages the Google Places API, which serves precise location for any given venue. We built an in memory spatial index that included each of those locations (with a square boundary based on the target distance we were looking for). For each tweet, nEmesis identifies a list of Google Places in the index that overlapped with the tweet based on its lat/long. If a given tweet had one or more location matches, the matching venues are added as an array attribute to the tweet.

Labeler

Each tweet in the data store is piped through our SVM model that assigns it an estimate of probability of foodborne illness. All tweets are annotated and saved back into the data store.

Aggregation Pipelines

We use Map Reduce framework on Google App

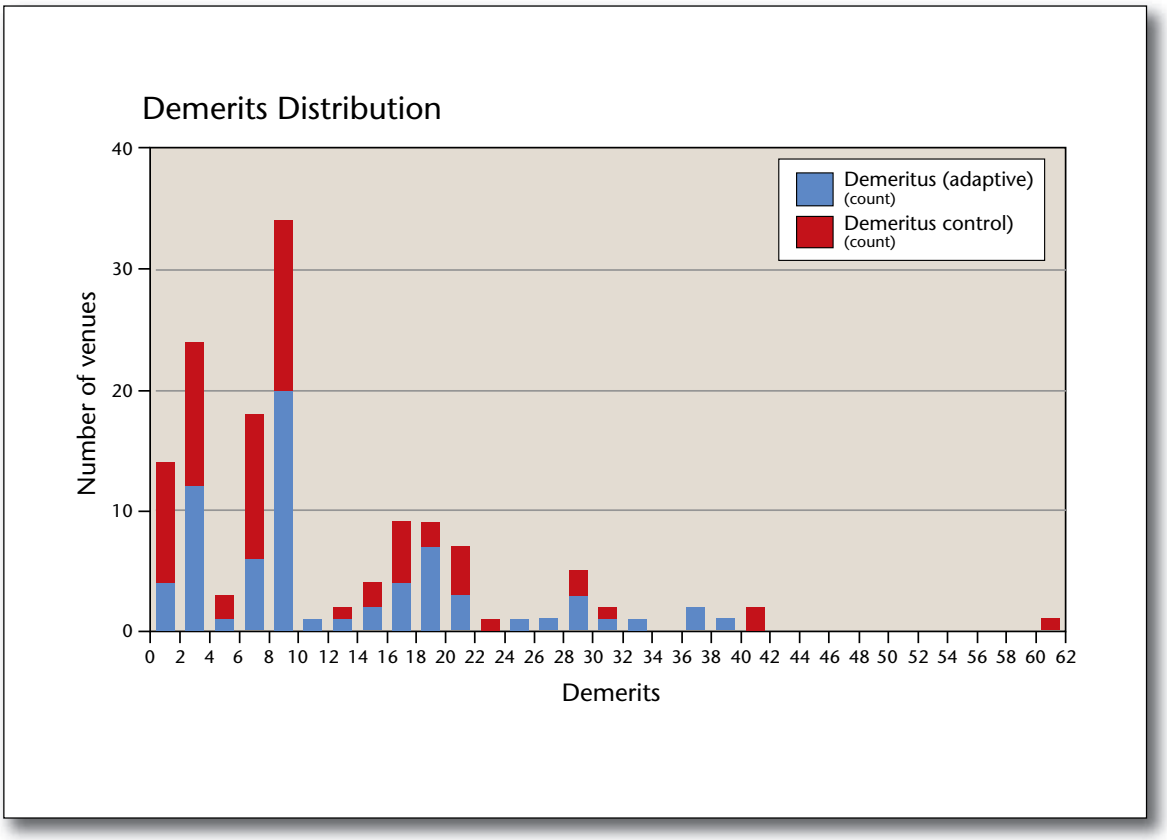

Figure 6. Histogram of the Inspection Results.

The adaptive inspections are blue (light gray), and the control inspections are red (dark gray). The horizontal axis is the number of demerits where the bucket size is 2, and the vertical axis is the number of venues.

Engine to support custom aggregation pipeline. It updates statistics about each venue (number of sick tweets associated with that venue, etc.).

Web Interface

The health professionals interact with nEmesis through a web application shown in figure 1. All modules described above work together to produce a unified view that lists most likely offending venues along with supporting evidence. This allows inspectors to make informed decisions how to allocate their resources. The application was written using a combination of Python for the data access layer and AngularJS for the front-end.

Developing the SVM model took 3 engineer-months. The backend modules above (Downloader through Labeler) took 2 engineer-months, and the Web Interface took an additional engineer-month.

Results and Discussion

Figure 6 is a histogram of the inspection results. There are clearly more control restaurants (red) that passed inspection with flying colors — zero or one demerit. The adaptive inspections (blue) appear to cluster toward the right — more demerits — but a careful statistical analysis is necessary to determine if this is really the case. We use paired Mann-Whitney-Wilcoxon tests to calculate the probability that the distribution of demerits for adaptive inspection is stochastically greater than the control distribution (Mann and Whitney 1947). This test can be used even if the shapes of the distributions are nonnormal and different, which is the case here. The test shows that adaptive inspections uncover significantly more demerits: nine versus six per inspection (p-value of 0.019).

Note that the result would have been even stronger if not for an outlier in the control group, a single control restaurant that received a score of 62 for egregious violations. Even including this outlier, however, we have very strong statistical evidence that adaptive inspections are effective.

Chi-squared test at the level of discrete letter grades (as noted earlier, 0–10 is an A, 11–20 is a B, 21–39 is a C, and 40+ is an F), also show a significant skew

toward worse grades in adaptive inspections. The most important distinction, however, is between restaurants with minor violations (grades A and B) and those posing considerable health risks (grade C and worse). nEmesis uncovers 11 venues in the latter category, whereas control finds only 7, a 64 percent improvement.

All of our data, suitably anonymized to satisfy Twitter's terms of use, is available upon request to other researchers for further analysis.

CDC studies show that each outbreak averages 17.8 afflicted individuals and 1.1 hospitalizations (CDC 2013). Therefore we estimate that adaptive inspections saved 71 infections and 4.4 hospitalizations over the three-month period. Since the Las Vegas health department performs more than 35,000 inspections annually, nEmesis can prevent over 9126 cases of foodborne illness and 557 hospitalizations in Las Vegas alone. This is likely an underestimate as an adaptive inspection can catch the restaurant sooner than a normal inspection. During that time, the venue continues to infect customers.

Adaptive inspections yield a number of unexpected benefits. nEmesis alerted SNHD to an unpermitted seafood establishment. This business was flagged by nEmesis because it uses a comprehensive list of food venues independent of the permit database. An adaptive inspection also discovered a food handler working while sick with an influenza-like disease. Finally, we observed a reduced amount of foodborne illness complaints from the public and subsequent investigations during the experiment. Between January 2, 2015, and March 31, 2015, SNHD performed 5 foodborne illness investigations. During the same time frame the previous year, SNHD performed 11 foodborne illness investigations. Over the last 7 years, SNHD averaged 7.3 investigations during this three-month time frame. It is likely that nEmesis alerted the health district to food safety risks faster than traditional complaint channels, prior to an outbreak.

Given the ambiguity of online data, it may appear hopeless to identify problematic restaurants fully automatically. However, we demonstrate that nEmesis uncovers significantly more problematic restaurants than current inspection processes. This work is the first to directly validate disease predictions made from social media data. To date, all research on modeling public health from online data measured accuracy by correlating aggregate estimates of the number of cases of disease based on online data and aggregate estimates based on traditional data sources (Grassly, Fraser, and Garnett 2005; Brownstein, Wolfe, and Mandl 2006; Ginsberg et al. 2008; Golder and Macy 2011; Sadilek et al. 2013). By contrast, each prediction of our model is verified by an inspection following a well-founded professional protocol. Furthermore, we evaluate nEmesis in a controlled double-blind experiment, where predictions are verified in the order of hours.

Finally, this study also showed that social-media-driven inspections can discover health violations that could never be found by traditional protocols, such as unlicensed venues. This fact indicates that it may be possible to adapt the nEmesis approach for identifying food safety problems in noncommercial venues, ranging from school picnics to private parties. Identifying possible sources of foodborne illness among the public could support more targeted and effective food safety awareness campaigns.

The success of this study has led the Southern Nevada Health District to win a CDC grant to support the further development of nEmesis and its permanent deployment statewide.

Acknowledgements

This research was partly funded by NSF grants 1319378 and 1516340; NIH grant 5R01GM108337-02; and the Intel ISTC-PC.

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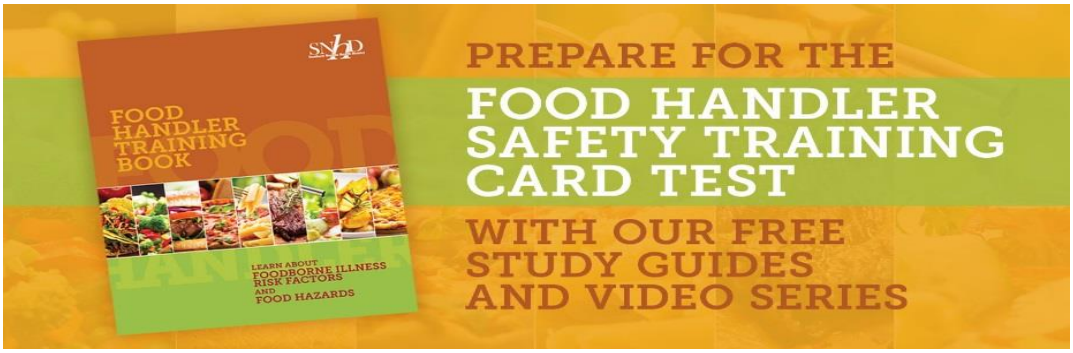


Project and Goal

In 2018, the University of Nevada's Cooperative Extension (UNCE) program contacted the SNHD to collaborate on a series of food safety videos for the residents of Clark County. With film prop donations provided by the Nevada Food Safety Task Force (NFSTF) and scripts provided by UNCE, the SNHD filmed 20 short video modules, each covering a variety of food safety topics. The goal of this collaboration was to educate current and potential food handlers looking to obtain a food handler card in order to work in a food establishment.

Filming and Post-Production

Several SNHD employees volunteered to act for two days of production after the Sahara Hotel and Casino (formerly SLS) generously offered an unused kitchen for filming. The actors who were following food safety regulations wore white aprons, while actors who were demonstrating non-compliant food handling wore red aprons. This gave a visual interpretation of food handlers' requirements in Clark County.

Post-production work included voice-over information that was timed to the pace of the visual shots. This allowed the information to be processed verbally and visually to every viewer. These 20 video modules were then posted to SNHD's YouTube page from a link provided on SNHD's website and are currently provided free to the public.

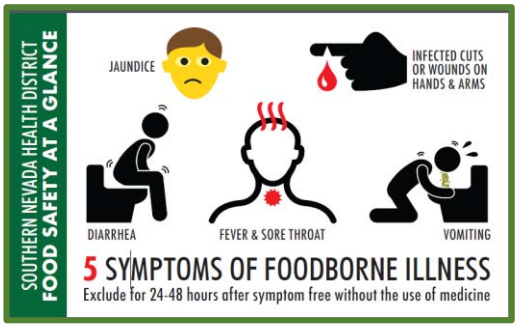
Results

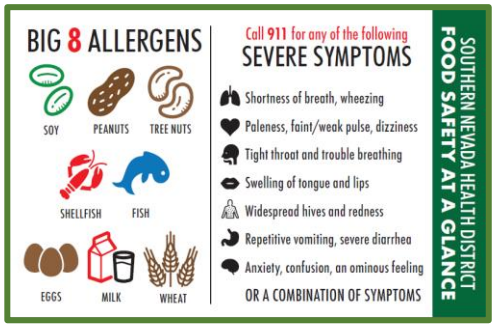
As of January 1, 2020, six months after posting, there were approximately 380,000 total views. By July 1, 2020, SNHD is anticipating around 750,000 total views, making it one of the most viewed video series SNHD has provided to the public. Approximately 100,000 Food Handler Safety Cards are given annually to English test takers with an overall passing rate of 85%. When comparing the first half of 2019 without the videos posted to the second half of 2019 after they were posted July 1, SNHD saw an increase in the overall passing rate of 2%. SNHD is hoping that the pass rate will surpass 90% once the videos have been made available to the public after one full year. Results will be revisited July 1, 2020.

Future Direction and Goals

The videos were filmed without any speaking roles for the actors. This was in anticipation of providing the videos in Spanish and potentially in other languages. Currently, the Food Handler Exam is taken in Spanish approximately 18% of the time and the historical passing rate is approximately 63%. The scripts have been professionally translated and recorded in Spanish and SNHD plans to release the videos in the near future. One goal for SNHD would be to increase the passing rate to above 75% after the videos have been posted for one full year and above 80% after two full years. Another goal is to translate and voice-over the videos to Mandarin in order to assist the Canton and Simplified Chinese test takers, which is the third most common Food Handler Exam taken. The current pass rate for Canton and Simplified Chinese test takers is 70% and the goal would be to increase this to 80%. If SNHD is successful in offering the videos in English, Spanish, and Mandarin, this would capture more than 99% of test takers for the Food Handler Exam.

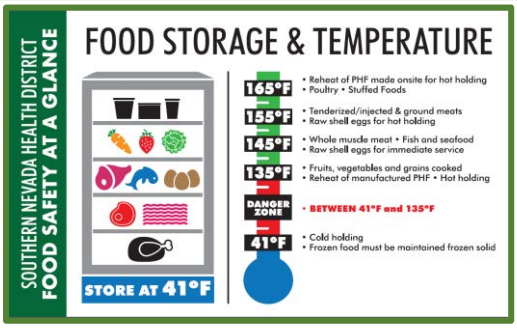
5 Symptoms of Foodborne Illness and Allergens/Allergic Reactions *Food Safety at a Glance* Card (Double Sided):

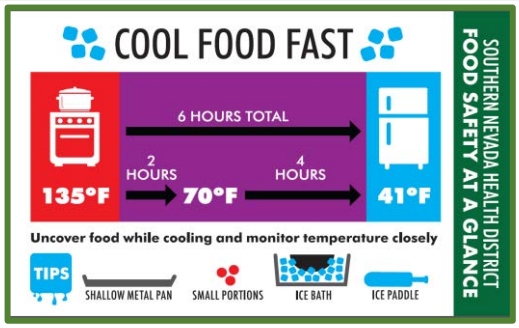




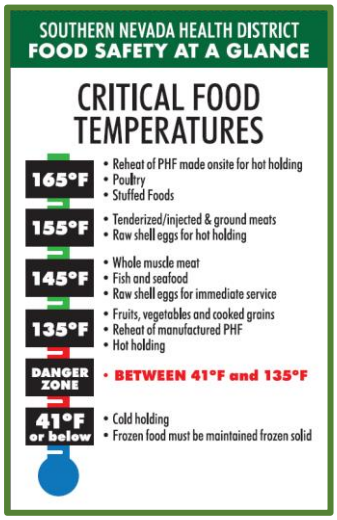
Handwashing *Food Safety at a Glance* Card (Double Sided):

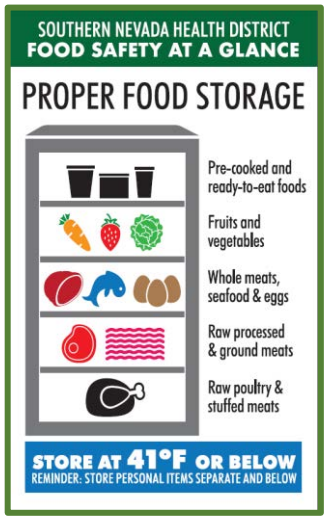
Cooling and Food Storage & Temperature *Food Safety at a Glance* Card (Double Sided):





Critical Food Temperatures and Proper Food Storage *Food Safety at a Glance* Card (Double Sided):





Last Page, Quarters 1 through 3, 2018

Your inspection experience is important to us! Please provide us with feedback regarding your most recent inspection by taking this 3-minute anonymous survey. The survey can be found at https://www.surveymonkey.com/r/SNHDEH

What should I do if an imminent health hazard occurs at my food establishment?

Immediately notify the health district and voluntarily discontinue operations. The health district will discuss the hazard with you and may approve a contingency plan. {8-204.12(f)}

If you fail to notify the health district and continue operations during an imminent health hazard, you will be issued a cease and desist order. You will also be assessed fees and required to pass an inspection, with fewer than 10 demerits and no identical repeat critical or major violations prior to reopening.

If your facility is closed for excessive violations with a history of non-compliance, including repeat critical or major violations, you may be required to attend a supervisory conference before an inspection to reopen the facility. Additionally, you will be required to pay all applicable fees before the inspection.

When in doubt, contact the health district food inspection operations office that inspects your establishment.

What is an imminent health hazard? Examples include, but are not limited to:

- Fire
- Flood
- No hot water
- No water
- Power outage
- Inadequate refrigeration
- Sewage backup
- Misuse of poisonous or toxic materials
- Onset of a suspected foodborne illness outbreak
- Pest infestation
- Gross unsanitary occurrences or conditions, or other circumstances that may endanger public health

Please contact SNHD if you encounter an imminent health hazard at one of the following numbers:

- **Food Operations General Contact Number**
  - **702-759-1110 Desk**
- **Larry Rogers - Food Operations Manager**
  - **702-759-0837 Desk**
- **Jackie Reszetar - Environmental Health Director**
  - **702-759-0590 Desk**

If a hazard occurs outside our regular business hours, call our 24-hour phone number (702) 759-1600, choose the Environmental Health option and then press '1' to speak with an after-hours inspector.

Last Page, Quarter 4, 2018

HOW TO OBTAIN YOUR

FOOD HANDLER SAFETY TRAINING CARD

A Food Handler Safety Training Card is required for people working in or operating a food establishment as defined by NRS 446.030. To obtain the card, you are required to complete and pass a test at one of these Southern Nevada Health District testing sites:

Southern Nevada Health District
Main Facility
280 S. Decatur Blvd.
Las Vegas, NV 89107

East Las Vegas Public Health Center
560 N. Nellis Blvd
Ste. E-12
Las Vegas, NV 89110

Health District Services at Henderson City Hall
240 S. Water St.
Henderson, NV 89015

Mesquite Public Health Center
830 Hafen Ln.
Mesquite, NV 89027

Laughlin Public Health Center
55 Civic Way
Laughlin, NV 89029

FEES

$20 FHST Card (valid 3 years)
$20 Duplicate Card
$15 Late Fee
$5 Re-test Fee

TRAINING MATERIALS

Free training books in English and additional languages are available online at **www.SNHD.info/foodhandler**

If you do not pass the test, you may return no sooner than the next business day. The fee to retake the test is $5.00. Duplicate or replacement Food Handler Safety Training Cards do not require testing until renewal.

For testing hours, visit **www.SNHD.info/foodhandler**

Last Page, Quarters 1 and 2, 2019

HOW TO SPOT A FAKE RESTAURANT INSPECTOR

Does your health inspector wear an identification badge? Do they have official business cards?

An Environmental Health Specialist (aka "health inspector") with the Southern Nevada Health District wears a picture ID badge. Health District inspectors will identify themselves, state the purpose of their visit, and ask to speak to a Person-In-Charge (PIC). They usually carry official business cards.

Did you receive a phone call to schedule a routine inspection?

Routine inspections are UNANNOUNCED. Scheduled inspections are usually follow-up activities such as re-inspections and surveys. If you are currently in the Plan Review process, our Facility Design Assessment & Permitting (FDAP) inspectors may schedule an on-site inspection.

Did they ask for any personal information including credit card information?

Health District inspectors will NOT ask for credit card information. Personal information requests are limited to a name, email address, and phone number. Email addresses are needed to send inspection reports, and phone numbers are primarily used to contact the PIC of a facility in case of an emergency or to request information.

Did they ask you for money or food?

Health inspectors will NOT ask for money; no financial transactions can be handled by a health inspector. Routine inspections do not have an associated fee. Annual health permit fees, re-inspection fees, verified complaint fees, and closure fees are remitted directly to the Health District, either online or in person, at any of the Health District's Environmental Health service locations. A health inspector can give you information about paying fees online or about locations where payments can be made. Health inspectors will not ask for or accept food.

Did they provide an inspection report?

A health inspection (including follow-up visits) will be documented on an inspection report and be sent to the PIC (or designated recipient) via email, fax, or paper form within 24 hours. If a routine inspection was conducted, an inspector will provide a grade card before leaving.

SNHD
Southern Nevada Health District

If you are still in doubt, you can call the Southern Nevada Health District to verify information.

Monday-Friday 8:00 a.m. – 4:30 p.m.
(702) 759-1110

NOTE: Health inspectors from the Southern Nevada Health District may conduct inspections outside of normal Health District business hours.

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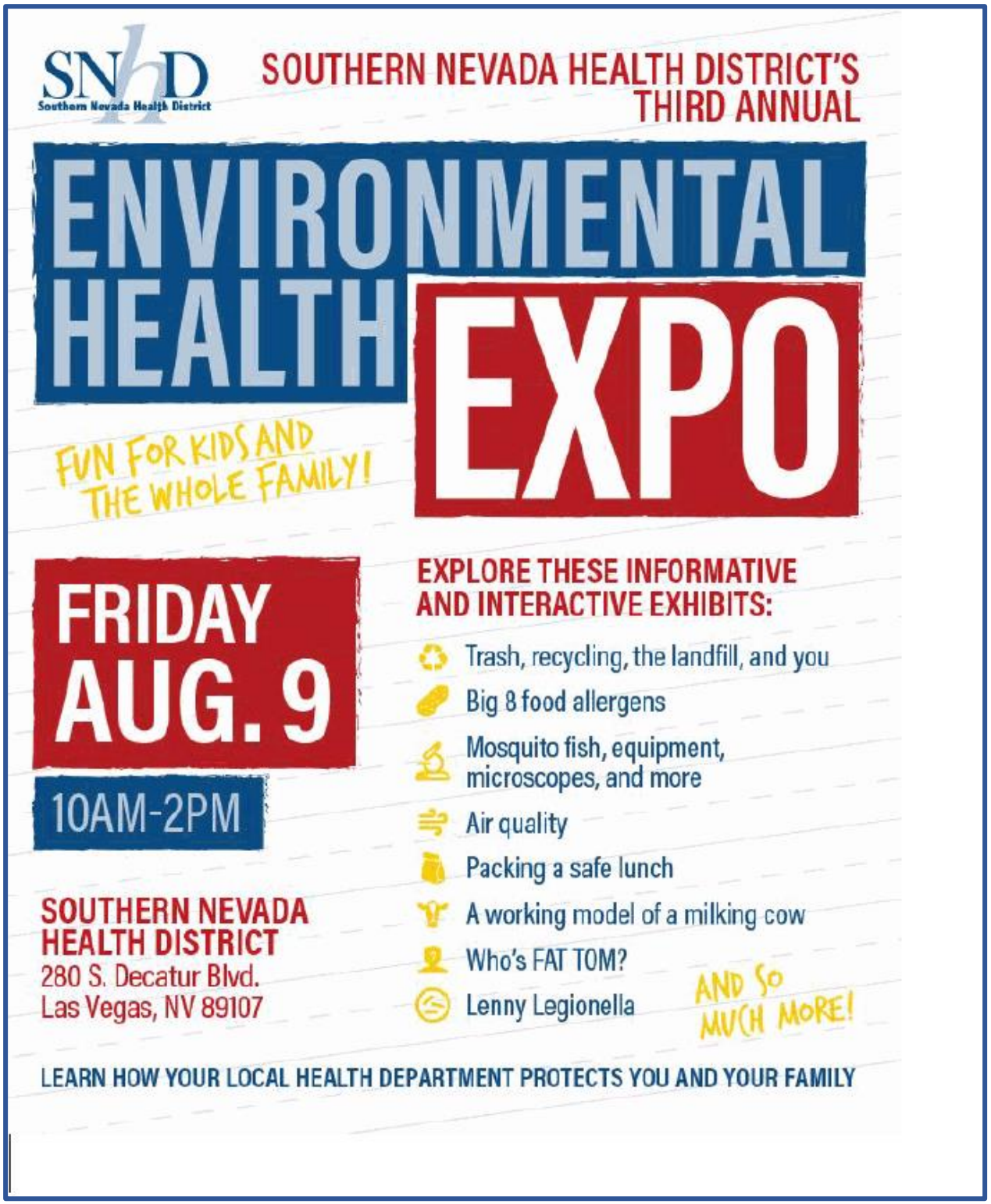

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FIGHT the BITE

HELP PREVENT DISEASES THAT CAN BE SPREAD BY **MOSQUITOES**

Eliminate standing water

Prevent mosquito bites

Report mosquito activity

In August, the Southern Nevada Health District declared an outbreak of West Nile virus. This season, the highest number of human cases have been reported since the disease was first detected in the state in 2004. In addition to the high number of cases, many of those who have been ill have had the more serious neuroinvasive form of the illness.

West Nile virus is transmitted by the bite of an infected mosquito. The illness is not spread person-to-person. The best way to keep from getting sick is to prevent mosquito bites. People can protect themselves and their families by taking the following precautions:

- When outdoors, use Environmental Protection Agency (EPA)-registered insect repellents containing DEET, Picaridin, IR3535, Oil of lemon eucalyptus (OLE), or 2-undecanone.
- Wear pants and long-sleeved shirts when outdoors. Treat clothing and outdoor gear with repellent.
- Make sure doors and windows have tight-fitting screens without tears or holes.
- Prevent mosquito breeding by eliminating areas of standing water around homes, including unmaintained swimming pools.

Additional tips and more information about West Nile virus are available on the Health District website at www.snhd.info/west-nile and on the Centers for Disease Control and Prevention website at www.cdc.gov/westnile/prevention/index.html.

If you think you or your family member have West Nile Virus, please contact your doctor.

Residents can report mosquito activity to the Mosquito Surveillance Program at 702-759-1633. Updated information about the Health District's surveillance activities is available each week at www.snhd.info/wn-updates.

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food FOR THOUGHT

ISSUE 1 – JANUARY 2020

At the Southern Nevada Health District, it is a top priority to provide open communication and partner with industry to reach our shared goal of safer food.

Fee schedule changes effective February 1

The Southern Nevada District Board of Health approved the following changes to the Environmental Health (EH) fee schedule effective February 1, 2020:

- C downgrade fee increased to $1,200
- Closure fee increased to $1,400
- New fees for expedited plan review inspections (dependent upon staff availability)

For a list of all EH fees, visit **www.snhd.info/eh-fees**.

HACCP plans to be enforced July 1

Hazard Analysis Critical Control Point (HACCP) plans for all special processes required by regulations will be enforced July 1, 2020. Information about this topic can be found at **www.snhd.info/haccp**.

EH training office changes name

The EH training office has a new name: Regulatory Support Office. This title better describes the diverse functions it provides the EH Division. In addition to providing internal and external training, staff members in the office review HACCP plans, waivers and labels; provide regulation interpretation; serve as liaison with federal, state and local partners; conduct research on emerging topics; oversee inspector standardization; and much more.

Vaping now prohibited in restaurants and more

The Nevada Clean Indoor Air Act was updated during the 2019 legislative session to include electronic vaping products, preventing their use in public places where cigarette use is not allowed.

For more information, and to download or request free signage, visit **www.gethealthyclarkcounty.org/nciaa**.

Food Safety Partnership meetings and trainings are free and open to all

Held quarterly at the Health District's main location (280 S. Decatur Blvd.), Food Safety Partnership (FSP) meetings provide an interactive platform to:

- Meet the EH leadership team
- Get clarification on regulatory requirements
- Get trained on hot topics
- Seek answers to questions

Free food safety training in English and Spanish is available after each FSP meeting.

- Training taught by Health District trainers
- Great refresher for lead staff and new managers
- Opportunity to get trained to train coworkers

For more information and to register for our next meeting and trainings, visit **www.snhd.info/ehrcp**.

Resources

Food Establishment Resource Library
www.snhd.info/ferl

Food Handler Safety Training Books and Videos
www.snhd.info/food-handler

Food Recall Information
www.snhd.info/food-recalls

Social Media

- Facebook.com/southernnevadahealthdistrict
- Facebook.com/snhdfoodsafety
- Twitter.com/snhdinfo
- Twitter.com/snhdfoodsafety
- Instagram.com/southernnevadahealthdistrict
- Instagram.com/snhdfoodsafety

Contact Us

Business hours: (702) 759-0588
After hours: (702) 759-1600
Email: environmentalhealth@snhd.org

EH CUSTOMER SATISFACTION SURVEY
06/08/2018 to 09/08/2018

Introduction:

Prior to implementing the Environmental Health (EH) Customer Satisfaction Survey, the Southern Nevada Health District (SNHD) EH division did not have a formal method of assessing the regulated industry's perception of SNHD field staff. While customer complaints were handled on a case by case basis by EH management, the overall performance of EH field staff as a whole was not evaluated. The purpose of the survey was to allow the regulated community the opportunity to provide anonymous feedback concerning SNHD EH field staff performance. The data obtained could be utilized to identify weaknesses and inform training if necessary.

Methods:

Questions were designed to assess EH Food Operations Staff customer service. An anonymous survey was created utilizing Survey Monkey and a link to the survey was provided via email after every inspection (916) and reinspection (914). A survey link was also included on the last page of every 916 and 914 report. If the facility was unable to receive the information via email, EH administrative personnel were instructed to mail or fax a copy of the survey containing the same questions and format as the online version. The survey was initiated November 2017 and was evaluated quarterly. Revisions to the survey questions were made based on the results from the previous quarter. The results below are for the period June 8, 2018 to September 8, 2018.

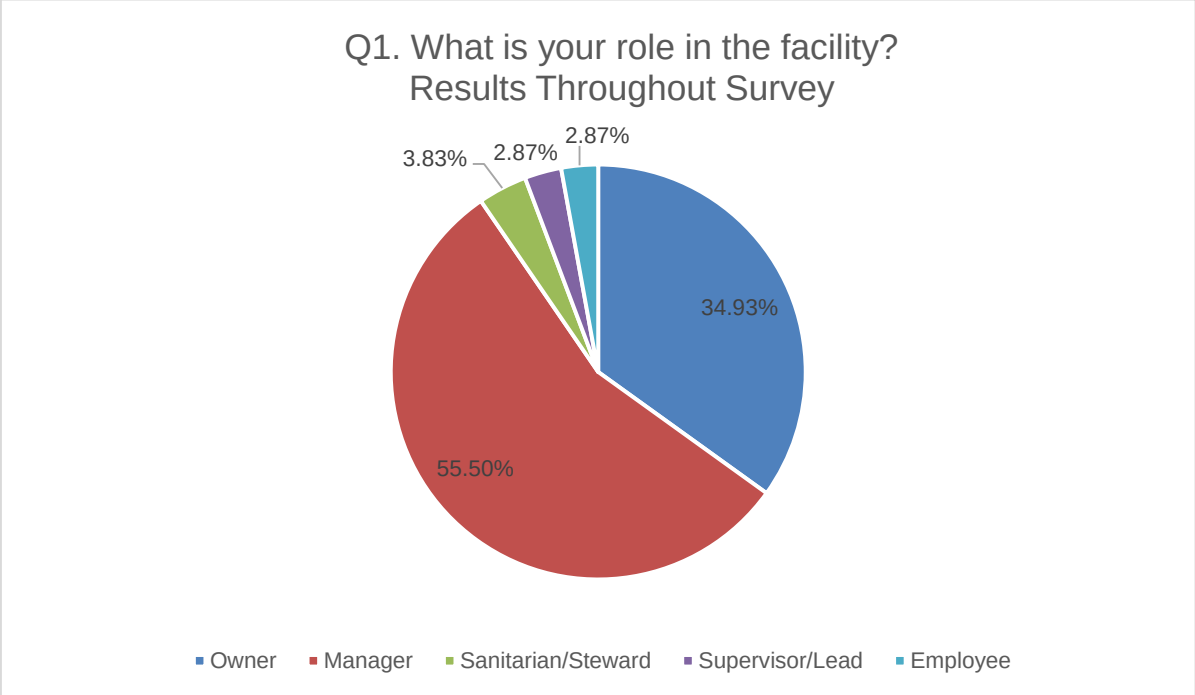
Results and Conclusions:

The survey provided valuable quantifiable data concerning the SNHD EH field staff customer service skills including communication, knowledge, and professionalism. Additional details about the survey participants were also obtained via multiple demographic and firmographic questions.

During field inspections, SNHD Food Operations staff interacted with a variety of facility representatives. Question 1 was designed to discern the role of the respondent within the regulated food establishment.

N=209

Q1. What is your role in the facility?								
	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Answered	**67**	**Answered**	**73**	**Answered**	**69**	**Answered**	**209**
Answer Choices	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**
Owner	40.30%	27	35.62%	26	28.99%	20	34.93%	73
Manager	50.75%	34	56.16%	41	59.42%	41	55.50%	116
Sanitarian/Steward	4.48%	3	2.74%	2	4.35%	3	3.83%	8
Supervisor/Lead	1.49%	1	4.11%	3	2.90%	2	2.87%	6
Employee	2.99%	2	1.37%	1	4.35%	3	2.87%	6



Results suggest that respondents represent a variety of positions within the facility. Responses indicated that a majority (55.5%) of people responding were at the manager level. However, facility owners also comprised a large portion (~35%) of respondents. Employees, sanitation/stewards, and supervisor/leads composed very similar portions of the remaining approximately10%.

To promote confidence in results, it was important to receive as many survey responses as possible. SNHD set a primary goal of obtaining feedback from at least 10% of the facilities receiving inspections and reinspections. However, the SNHD permitting system made calculating accurate response rates difficult. Simply calculating the "percent surveys per 916s and 914s completed" as shown in the second chart below assumes a one to one ratio between inspections/reinspections completed and surveys submitted. This assumption may not be valid. Many food establishments have multiple permits and therefore, may receive more than one 916 or 914 but are unlikely to submit more than one survey per visit.

Question 2 was designed to determine how many inspections and reinspections were completed during a single visit and thus increase accuracy in calculated response rates. Each "answer choice" was multiplied with the "number of responses" to determine the product as reported below. If the respondent answered ">10" then 11 was used to determine the product. The sum of the "product of answer choices and surveys completed" was calculated to represent "the total inspections accounted for". The "percent of inspected facilities completing survey" was then calculated by dividing the "number of surveys completed" by the calculated "total inspections accounted for".

N=209

Q2. How many inspections did you receive on the last visit?								
Answer Choices	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Number of responses	* Product of answer choice and surveys completed	Number of responses	* Product of answer choice and surveys completed	Number of responses	* Product of answer choice and surveys completed	Number of responses	* Product of answer choice and surveys completed
1	35	35	41	41	29	29	105	105
2	10	20	15	30	23	46	48	96
3	3	9	8	24	5	15	16	48
4	8	32	5	20	3	12	16	64
5	6	30	2	10	2	10	10	50
6	0	0	0	0	0	0	0	0
7	0	0	0	0	2	14	2	14
8	0	0	0	0	2	16	2	16
9	4	36	1	9	0	0	5	45
10	1	10	0	0	0	0	1	10
>10	0	0	1	11	3	33	4	44
Total inspections accounted for	172		145		175		492	

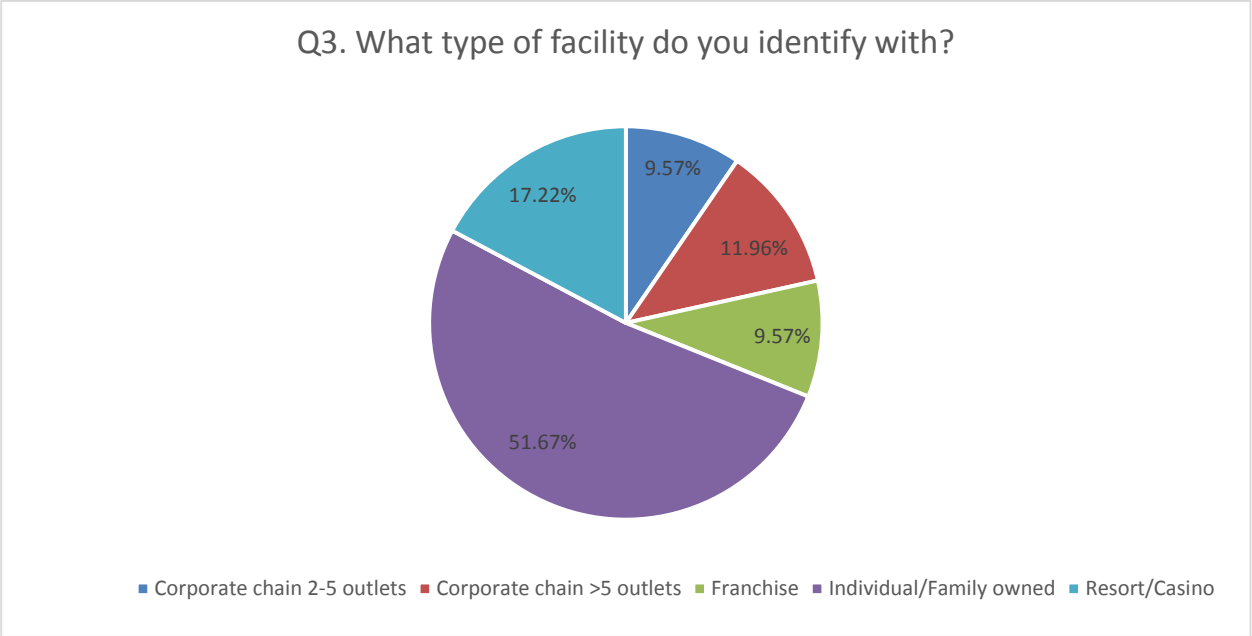
Date Range:	**Number of 916 and 914 combined**	**Number of Surveys Completed**	**% Surveys per 916 and 914 completed**	**Total Inspections Accounted For**	*** Percent of Inspected Facilities Completing Survey**
06/08/2018 – 07/07/2018	2154	68	3.1%	172	7.99%
07/08/2018-08/07/2018	2356	76	3.2%	145	6.15%
08/07/2018 – 09/08/2018	2359	69	2.9%	175	7.41%
06/08/2018-09/08/2018	7049	209	3.0%	492	6.98%

Responses to Question 2 indicate that nearly half of the facilities received more than one inspection/reinspection. While the calculated “% surveys per 916 and 914 completed” was low (3%), the “percent of inspected facilities completing survey” (~7%) was much closer to the SNHDs 10% goal.

In addition, to receiving as many responses as possible, it was important to ensure that feedback was received from a variety of establshment types. Questions 3 and 4 were designed to provide insight into the type of facilities that were responding to the survey.

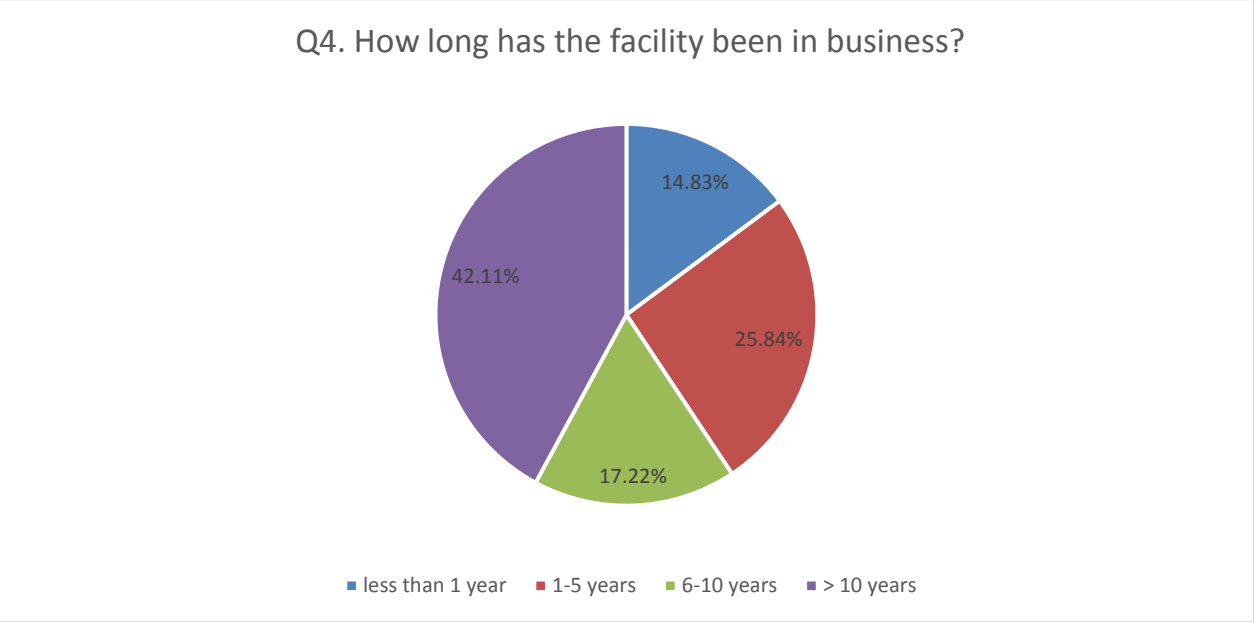
N=209

Q3. What type of facility do you identify with?								
	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Answered	**67**	**Answered**	**73**	**Answered**	**69**	**Answered**	**209**
Answer Choices	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**
Corporate chain 2-5 outlets	10.45%	7	12.33%	9	5.80%	4	9.57%	20
Corporate chain >5 outlets	5.97%	4	16.44%	12	13.04%	9	11.96%	25
Franchise	11.94%	8	4.11%	3	13.04%	9	9.57%	20
Individual/Family owned	46.27%	31	58.90%	43	49.28%	34	51.67%	108
Resort/Casino	25.37%	17	8.22%	6	18.84%	13	17.22%	36



N=209

Q4. How long has the facility been in business?								
	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Answered	**67**	**Answered**	**73**	**Answered**	**69**	**Answered**	**209**
Answer Choices	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**
< 1 year	14.93%	10	10.96%	8	18.84%	13	14.83%	31
1-5 years	28.36%	19	32.88%	24	15.94%	11	25.84%	54
6-10 years	22.39%	15	13.70%	10	15.94%	11	17.22%	36
> 10 years	34.33%	23	42.47%	31	49.28%	34	42.11%	88

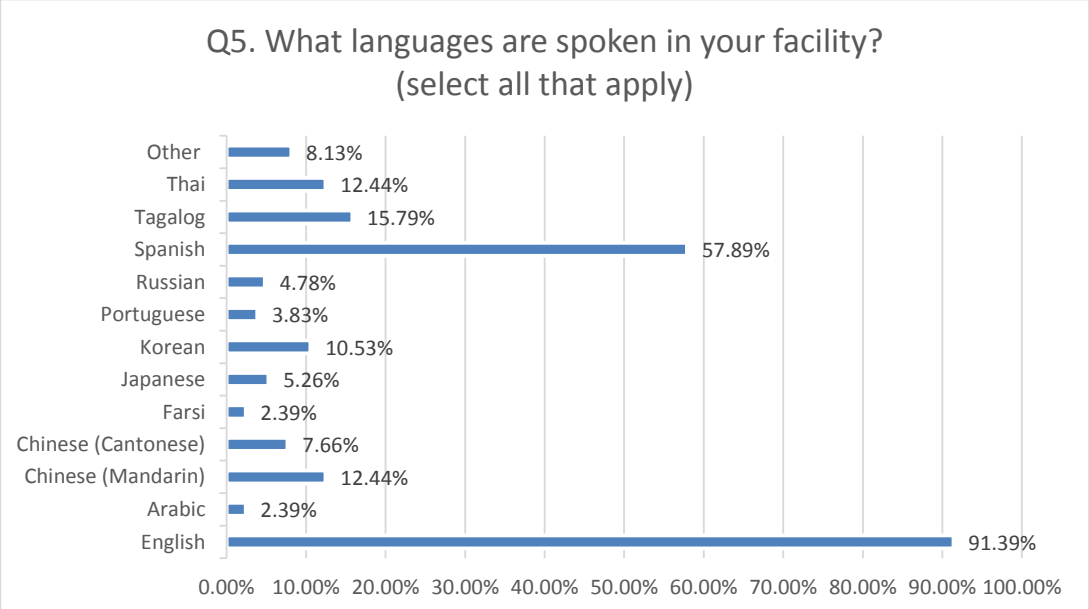


The results to Questions 3 and 4 indicate that a variety of establishment types chose to participate in the survey. Approximately half (51%) of the respondents were affiliated with an independently owned establishment. Corporate chains and franchises accounted for approximately 30% of the responses and the remaining respondents were associated with resorts/casinos (~17%). In addition, almost half (42%) of the respondents were affilated with a facility that had been in business for greater than 10 years and 26% had been in business 1-5 years. Facilities in business for 6 to 10 years and less than 1 year had the least amount of participation but still represented a significant portion of responses (17% and ~15% respectively).

Clark County has a very diverse population with many languages spoken. Communication is vital to ensuring public health. However, the variety of languages spoken within facilities can pose a challenge. Questions 5 and 6 were designed to assess the languages spoken within regulated food establishments. While Question 5 aimed to gauge the variety of the different languages, Question 6 was created to determine the single primary language spoken within the facility.

N=209

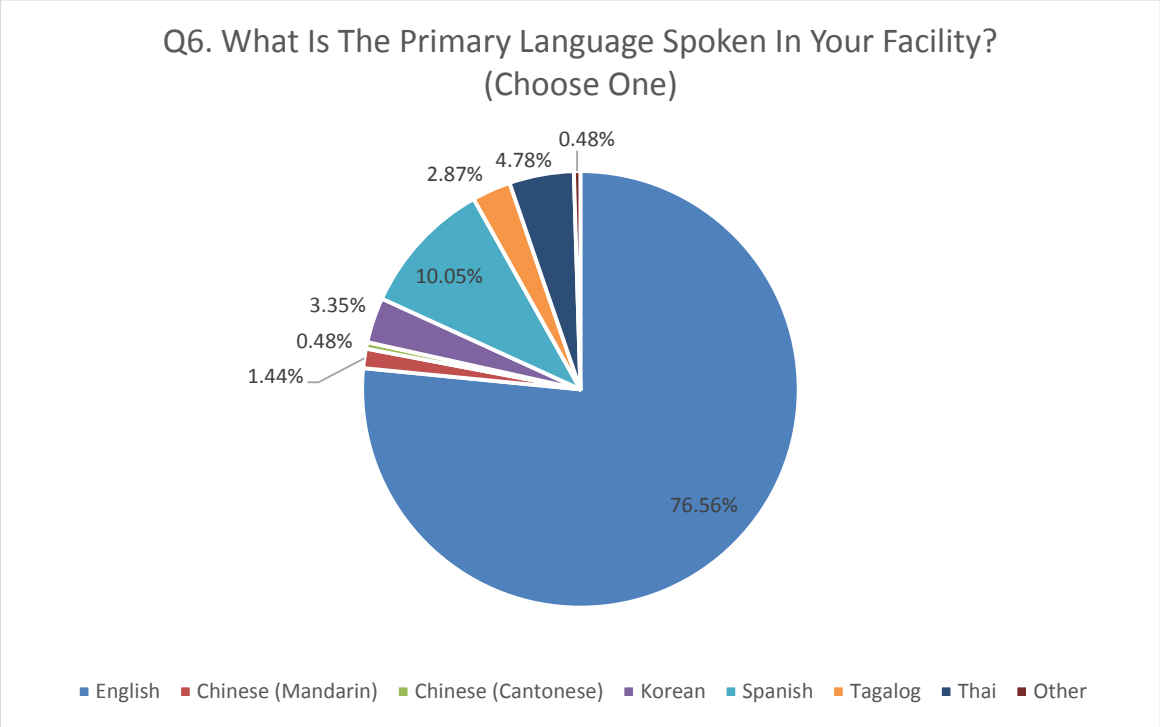
Q5. What languages are spoken in your facility? (select all that apply)								
	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Responses		Responses		Responses		Responses	
Answer Choices	**Answered**	**67**	**Answered**	**73**	**Answered**	**69**	**Answered**	**209**
	Skipped	**0**	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**
English	89.55%	60	94.52%	69	89.86%	62	91.39%	191
Arabic	0.00%	0	1.37%	1	5.80%	4	2.39%	5
Chinese (Mandarin)	14.93%	10	8.22%	6	14.49%	10	12.44%	26
Chinese (Cantonese)	10.45%	7	5.48%	4	7.25%	5	7.66%	16
Farsi	1.49%	1	0.00%	0	5.80%	4	2.39%	5
Japanese	2.99%	2	4.11%	3	8.70%	6	5.26%	11
Korean	5.97%	4	8.22%	6	17.39%	12	10.53%	22
Portuguese	2.99%	2	2.74%	2	5.80%	4	3.83%	8
Russian	1.49%	1	2.74%	2	10.14%	7	4.78%	10
Spanish	56.72%	38	61.64%	45	55.07%	38	57.89%	121
Tagalog	10.45%	7	16.44%	12	20.29%	14	15.79%	33
Thai	19.40%	13	6.85%	5	11.59%	8	12.44%	26
Other (please specify)	10.45%	7	6.85%	5	7.25%	5	8.13%	17



While a majority of respondents (91%) reported English as a language spoken within the facility, the responses to Question 5 demonstrated the diversity of food handlers within Clark County facilities. Respondents reported that Spanish was spoken in over half the facilities (~58%). In addiiton,each speciifed language was selected by at least 5 respondents. Furthermore, a variety of languages were specified under the "other" answer choice including: Hindi, Marathi, Amharic, Samoan-Pilipino-Hawaiian, German, French, Vietnamese, English, and Thai.

N=209

Q6. What is the primary language spoken in your facility? (choose one)								
	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
Answer Choices	**Answered**	**67**	**Answered**	**73**	**Answered**	**69**	**Answered**	**209**
	Skipped	**0**	**Skipped**	**0**	**Skipped**	**0**	**Skipped**	**0**
English	67.16%	45	80.82%	59	81.16%	56	76.56%	160
Arabic	0.00%	0	0.00%	0	0.00%	0	0.00%	0
Chinese (Mandarin)	0.00%	0	0.00%	0	4.35%	3	1.44%	3
Chinese (Cantonese)	0.00%	0	1.37%	1	0.00%	0	0.48%	1
Farsi	0.00%	0	0.00%	0	0.00%	0	0.00%	0
Japanese	0.00%	0	0.00%	0	0.00%	0	0.00%	0
Korean	1.49%	1	1.37%	1	7.25%	5	3.35%	7
Portuguese	0.00%	0	0.00%	0	0.00%	0	0.00%	0
Russian	0.00%	0	0.00%	0	0.00%	0	0.00%	0
Spanish	20.90%	14	6.85%	5	2.90%	2	10.05%	21
Tagalog	0.00%	0	6.85%	5	1.45%	1	2.87%	6
Thai	10.45%	7	2.74%	2	1.45%	1	4.78%	10
Other (please specify)	0.00%	0	0.00%	0	1.45%	1	0.48%	1



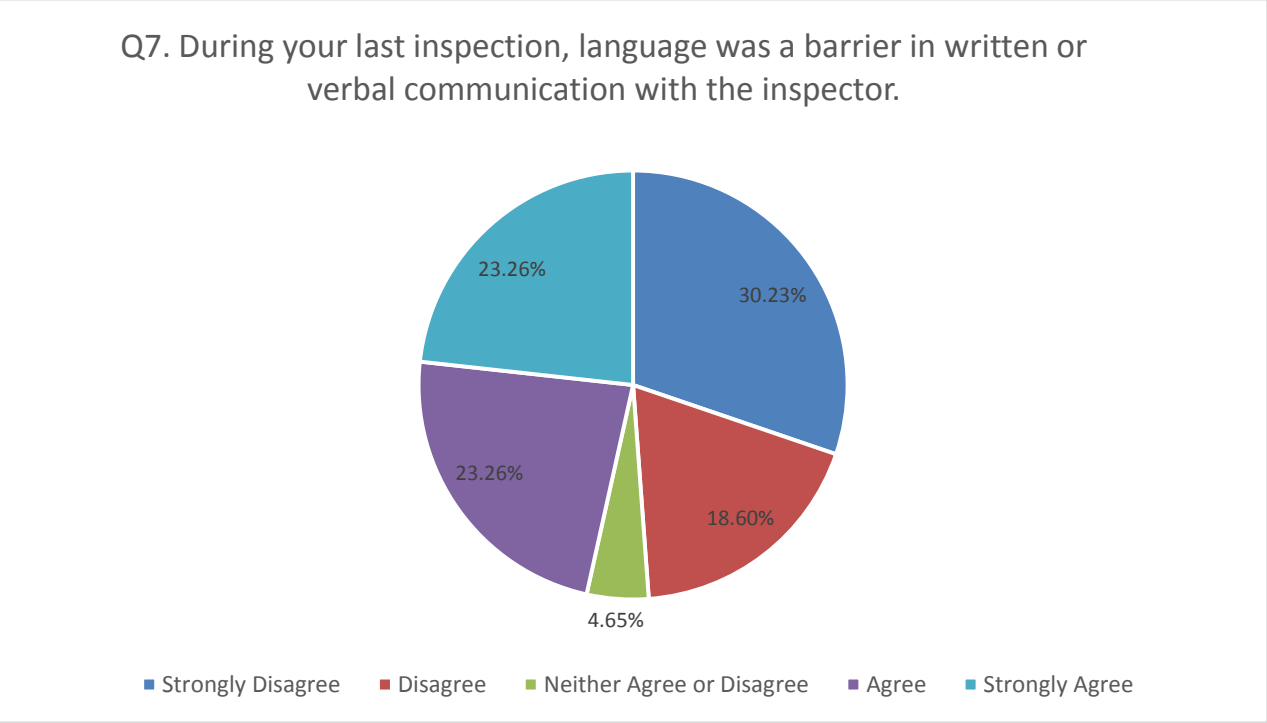
The responses to Question 6 indicated that 23.4% of the facilities completing the survey spoke a primary language other than English. It is also important to note that the survey was only offered in English . Therefore, it is likely that facilities without English as a primary language are underrepresented by the survey results. Since the majority of EH staff only speak English and the SNHD Food Regulations are only available in English, conveying food safety and promoting compliance with regulations may be difficult.

The purpose of Question 7 was to determine if respondents felt that language diversity negatively influenced communication between EH and facility staff. Since language should not be an obstacle for facilities that primarily communicate in English, participation in Question 7 was limited to facilities indicating another primary language.

N=43

Q7. During your last inspection, language was a barrier in written or verbal communication with the inspector.

	Answer Choices												Responses	
Date Range	Strongly Disagree		Disagree		Neither Agree or Disagree		Agree		Strongly Agree		Total	Weighted Average	Answered	Skipped
06/08/2018-07/07/2018	20.00%	4	20.00%	4	5.00 %	1	30.00%	6	25.00 %	5	20	3.2	20	47
7/08/2018-08/07/2018	54.55%	6	27.27%	3	9.09 %	1	9.09%	1	0.00%	0	11	1.73	11	62
08/08/2018-09/08/2018	25.00%	3	8.33%	1	0.00 %	0	25.00%	3	41.67 %	5	12	3.5	12	57
06/08/2018-09/08/2018	30.23%	13	18.60%	8	4.65 %	2	23.26%	10	23.26 %	10	43	2.91	43	166



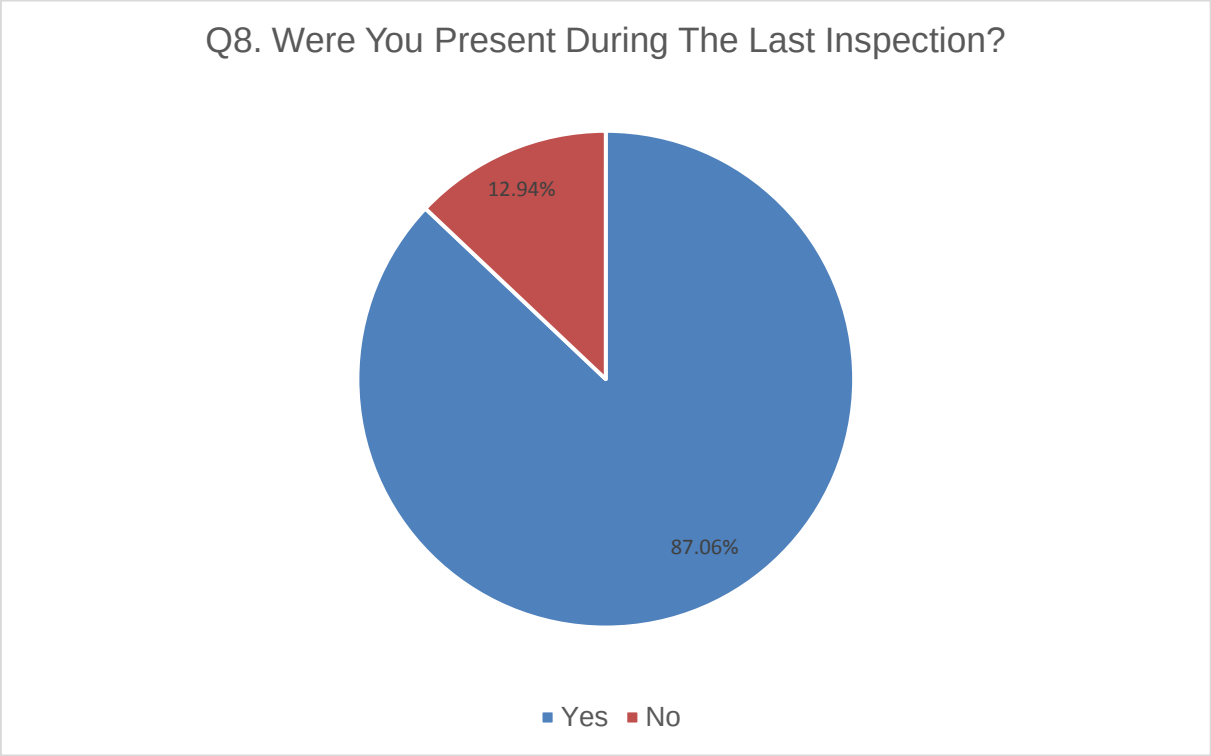
Despite SNHD attempts to compensate for differences in languages via nonverbal communication, translated guidance documents, and translation services, language barriers remain a significant challenge. Nearly half of the responses to Question 7 indicated that language was a communication barrier. Regardless of the language spoken, SNHD's goal is to continually improve written and verbal communication with facilities.

There are occasions when facility staff request that the 916 or 914 reports be sent to a person that was not present during the inspection. Since the survey link was provided with the reports, respondents to the survey may not have been present during the inspection. Therefore, the survey respondent may not have directly observed staff performance during the visit. Question 8 assesses whether the respondent was present during the inspectors visit.

N=201

Q8. Were you Present During the Last Inspection?

Answer Choices	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Responses		Responses		Responses		Responses	
	Answered	**64**	**Answered**	**70**	**Answered**	**67**	**Answered**	**201**
	Skipped	**3**	**Skipped**	**3**	**Skipped**	**2**	**Skipped**	**8**
Yes	92.19%	59	88.57%	62	80.60%	54	87.06%	175
No	7.81%	5	11.43%	8	19.40%	13	12.94%	26



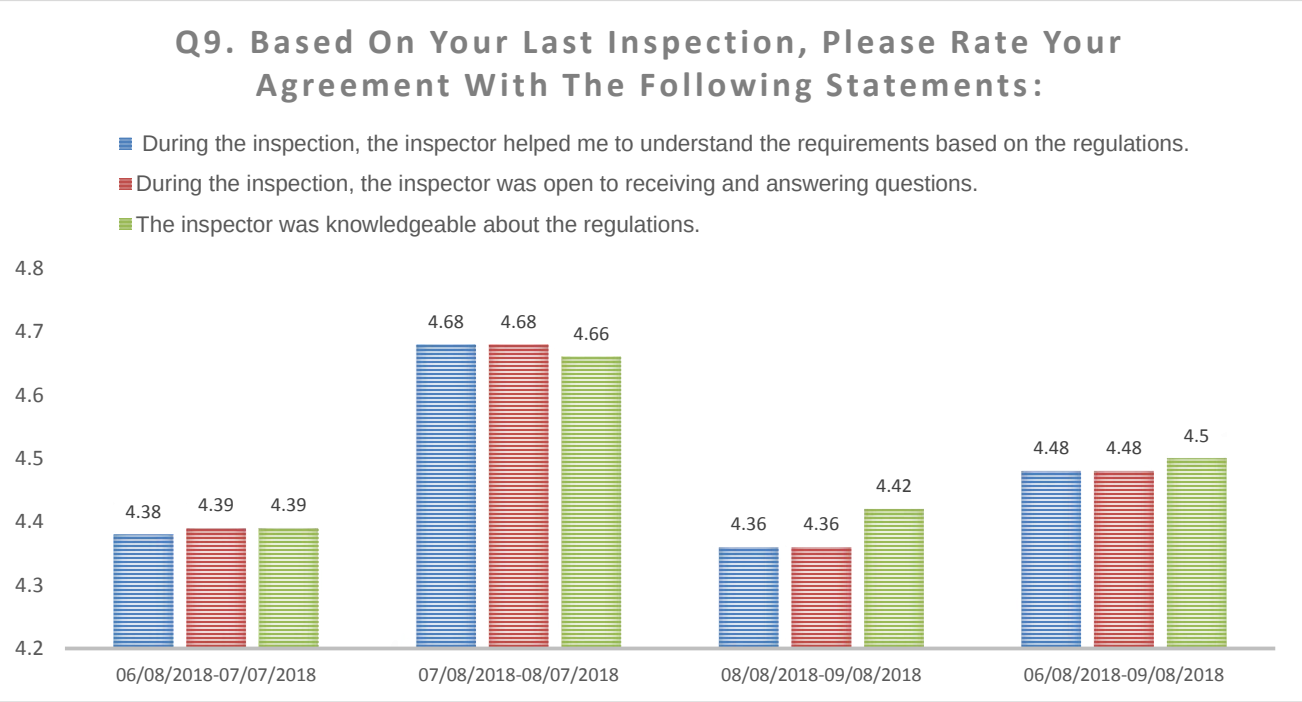
The results indicated that approximately 13% of the respondants were not present during the inspection and therefore, would not be directly aware of the inspectors performance during the visit. Since the two following questions were designed to assess SNHD staff's interaction and performance during inspections, participation in Questions 9 and 10 were limited to respondents that were present. If 'no' was marked for Question 8, then the two following questions were automatically skipped.

For Question 9, respondents were asked to rate their agreement with mutiple statements. Answer choices ranged from "strongly disagree" (1 point) to "strongly agree" (5 points).

N=165

Q9. Based on your last inspection, please rate your agreement with the following statements:

	Date Range	Answered	Skipped	Strongly Disagree		Disagree		Neither Agree or Disagree		Agree		Strongly Agree		Total	Weighted Average
During the inspection, the inspector helped me to understand the requirements based on the regulations.	06/08/2018-07/07/2018	56	11	3.57%	2	3.57%	2	10.71%	6	16.07%	9	66.07%	37	56	4.38
	07/08/2018-08/07/2018	59	14	5.08%	3	0.00%	0	1.69%	1	8.47%	5	84.75%	50	59	4.68
	08/08/2018-09/08/2018	50	19	12.00%	6	0.00%	0	2.00%	1	12.00%	6	74.00%	37	50	4.36
	06/08/2018-09/08/2018	165	44	6.67%	11	1.21%	2	4.85%	8	12.12%	20	75.15%	124	165	4.48
During the inspection, the inspector was open to receiving and answering questions.	06/08/2018-07/07/2018	56	11	3.57%	2	3.57%	2	10.71%	6	14.29%	8	67.86%	38	56	4.39
	07/08/2018-08/07/2018	59	14	5.08%	3	0.00%	0	0.00%	0	11.86%	7	83.05%	49	59	4.68
	08/08/2018-09/08/2018	50	19	12.00%	6	0.00%	0	4.00%	2	8.00%	4	76.00%	38	50	4.36
	06/08/2018-09/08/2018	165	44	6.67%	11	1.21%	2	4.85%	8	11.52%	19	75.76%	125	165	4.48
The inspector was knowledgeable about the regulations.	06/08/2018-07/07/2018	56	11	3.57%	2	1.79%	1	10.71%	6	19.64%	11	64.29%	36	56	4.39
	07/08/2018-08/07/2018	59	14	5.08%	3	0.00%	0	0.00%	0	13.56%	8	81.36%	48	59	4.66
	08/08/2018-09/08/2018	50	19	10.00%	5	2.00%	1	0.00%	0	12.00%	6	76.00%	38	50	4.42
	06/08/2018-09/08/2018	165	44	6.06%	10	1.21%	2	3.64%	6	15.15%	25	73.94%	122	165	4.5

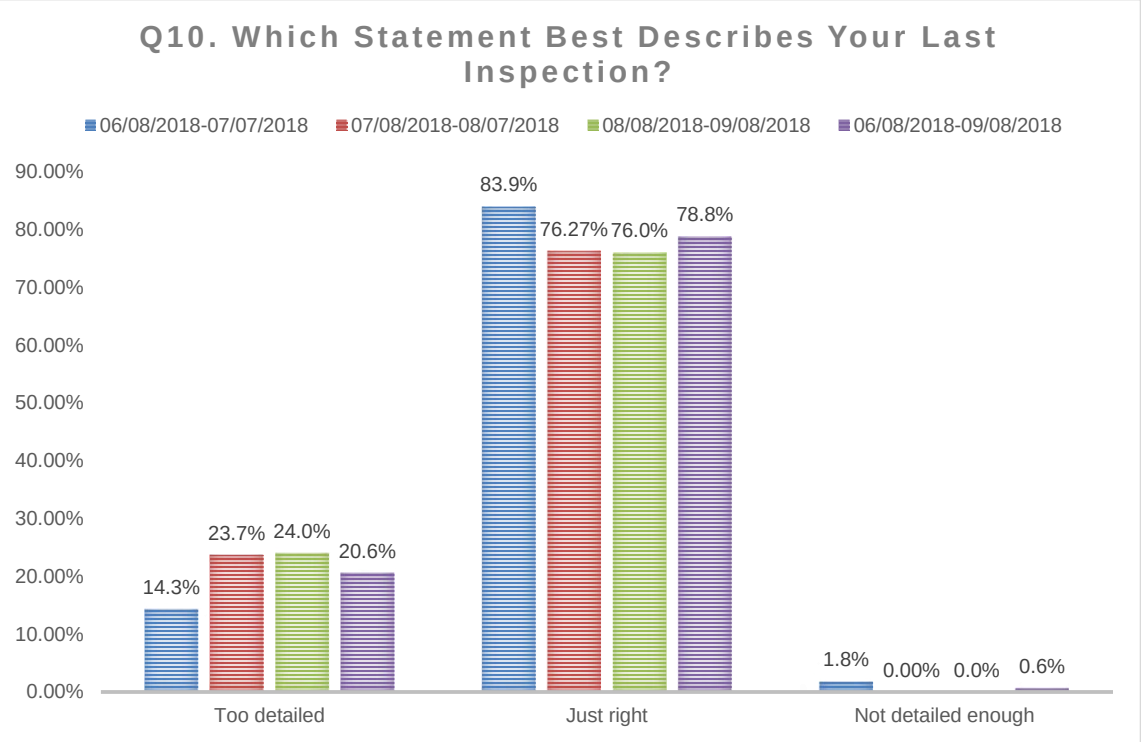


Overall, respondents were satisfied with the inspector's knowledge of the regulations and ability to convey regulatory requirements. In addition, responses indicated that the inspectors were willing to receive and answer questions. On average, respondents rated their agreement between 4 (agree) and 5 (strongly agree) for all three statements.

While Question 9 references inspector interactions and knowledge, Question 10 was designed to describe the level of detail during the inspection.

N=165

Q10. Which statement best describes your last inspection?								
Answer Choices	06/08/2018-07/07/2018		07/08/2018-08/07/2018		08/08/2018-09/08/2018		06/08/2018-09/08/2018	
	Responses		Responses		Responses		Responses	
	Answered	**56**	**Answered**	**59**	**Answered**	**50**	**Answered**	**165**
	Skipped	**11**	**Skipped**	**14**	**Skipped**	**19**	**Skipped**	**44**
Too detailed	14.29%	8	23.73%	14	24.00%	12	20.61%	34
Just right	83.93%	47	76.27%	45	76.00%	38	78.79%	130
Not detailed enough	1.79%	1	0.00%	0	0.00%	0	0.61%	1



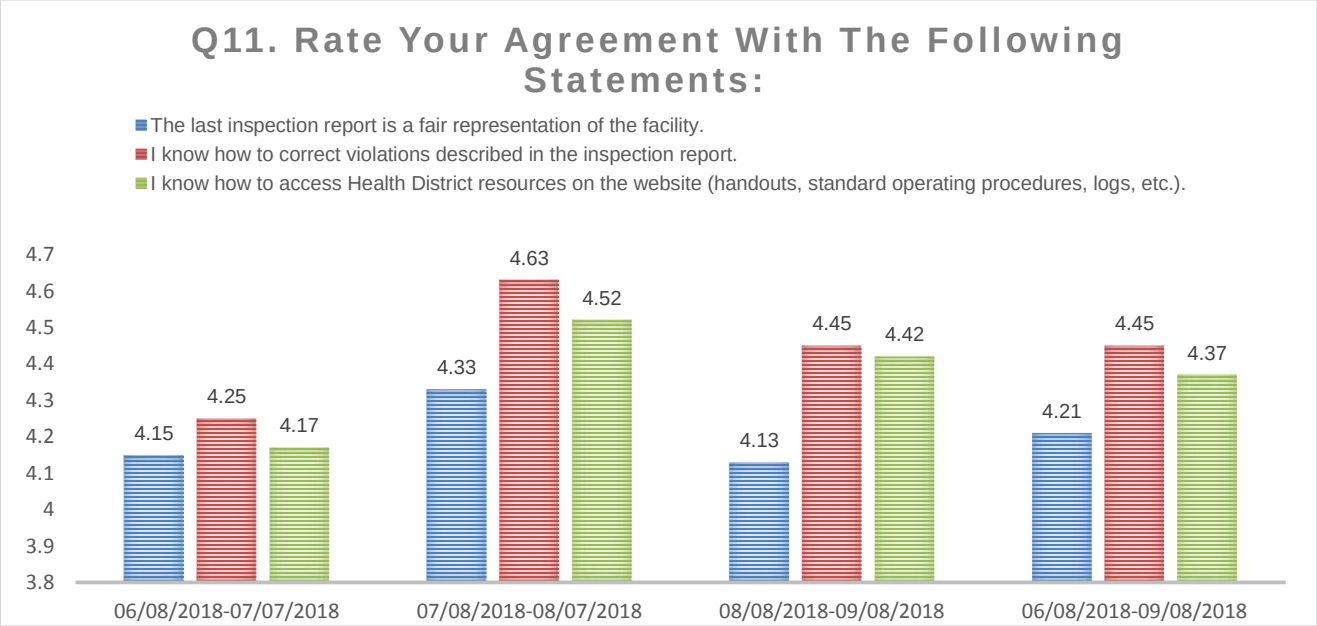
A majority of respondents (~79%) felt that the level of detail during the inspection was “just right”. Approximately 21% described the inspection as “too detailed” and less than 1% felt that the inspection was “not detailed enough.”

While Questions 9 and 10 are specific to onsite visits, Question 11 is based on written communication and accessibility of resources. Since their presence during the inspection should not influence the response, Question 11 was available to all survey respondents. Similar to Question 9, respondents were asked to rate their agreement with mutiple statements in Question 11. Answer choices ranged from “strongly disagree” (1 point) to “strongly agree” (5 points).

N=165

Q11. Rate your agreement with the following statements:

	Date Range	Answered	Skipped	Strongly Disagree		Disagree		Neither Agree or Disagree		Agree		Strongly Agree		Total	Weighted Average
The last inspection report is a fair representation of the facility.	06/08/2018-07/07/2018	60	7	5.00%	3	3.33%	2	10.00%	6	35.00%	21	46.67%	28	60	4.15
	07/08/2018-08/07/2018	67	6	4.48%	3	1.49%	1	8.96%	6	26.87%	18	58.21%	39	67	4.33
	08/08/2018-09/08/2018	60	9	10.00%	6	5.00%	3	5.00%	3	21.67%	13	58.33%	35	60	4.13
	06/08/2018-09/08/2018	187	22	6.42%	12	3.21%	6	8.02%	15	27.81%	52	54.55%	102	187	4.21
I know how to correct violations described in the inspection report.	06/08/2018-07/07/2018	60	7	3.33%	2	1.67%	1	13.33%	8	30.00%	18	51.67%	31	60	4.25
	07/08/2018-08/07/2018	67	6	2.99%	2	0.00%	0	2.99%	2	19.40%	13	74.63%	50	67	4.63
	08/08/2018-09/08/2018	60	9	5.00%	3	0.00%	0	5.00%	3	25.00%	15	65.00%	39	60	4.45
	06/08/2018-09/08/2018	187	22	3.74%	7	0.53%	1	6.95%	13	24.60%	46	64.17%	120	187	4.45
I know how to access Health District resources on the website (handouts, standard operating procedures, logs, etc.).	06/08/2018-07/07/2018	60	7	5.00%	3	0.00%	0	11.67%	7	40.00%	24	43.33%	26	60	4.17
	07/08/2018-08/07/2018	67	6	2.99%	2	0.00%	0	4.48%	3	26.87%	18	65.67%	44	67	4.52
	08/08/2018-09/08/2018	60	9	8.33%	5	0.00%	0	0.00%	0	25.00%	15	66.67%	40	60	4.42
	06/08/2018-09/08/2018	187	22	5.35%	10	0.00%	0	5.35%	10	30.48%	57	58.82%	110	187	4.37



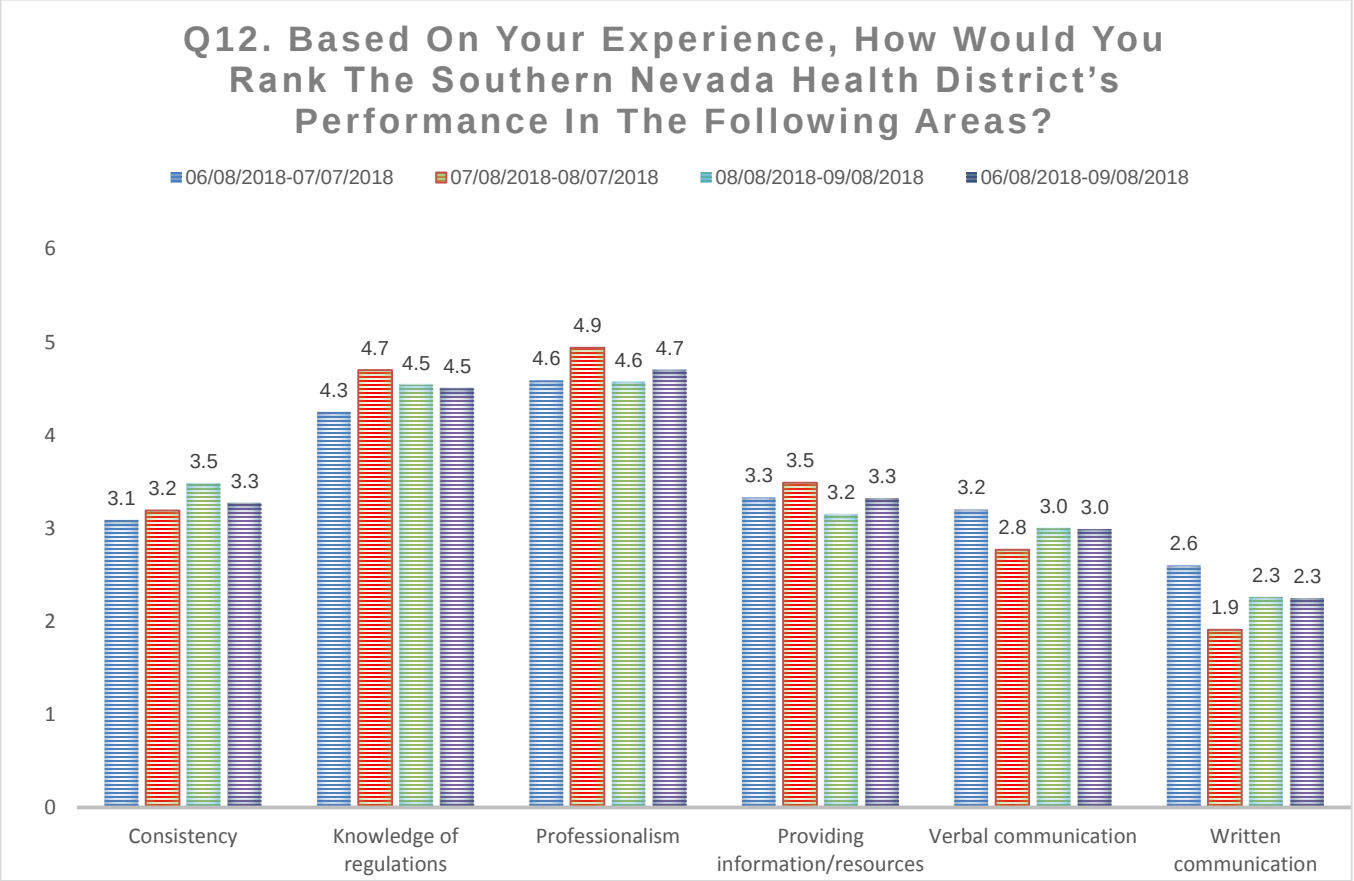
Overall, respondents agreed with the reports portrayal of the facility and reported having the knowledge to correct violations. In addition, responses indicated that the person taking the survey was aware of how to access SNHD resources. On average, respondents rated their agreement between 4 (agree) and 5 (strongly agree) for all three statements.

Questions 12 asked respondents to rank several staff performance categories from most favorable to least favorable. The highest score indicates that the category was ranked best when compared to the other answer choices.

N=187

Q12. Based on your experience, how would you rank the Southern Nevada Health District's performance in the following areas?

Answer Choices	06/08/2018-07/07/2018	07/08/2018-08/07/2018	08/08/2018-09/08/2018	06/08/2018-09/08/2018
	Answered 45	**Answered 47**	**Answered 54**	**Answered 146**
	Skipped 22	**Skipped 26**	**Skipped 15**	**Skipped 63**
Consistency	3.09	3.19	3.48	3.27
Knowledge of regulations	4.25	4.7	4.54	4.5
Professionalism	4.59	4.94	4.57	4.7
Providing information/resources	3.33	3.49	3.15	3.32
Verbal communication	3.2	2.77	3	2.99
Written communication	2.6	1.91	2.26	2.25



Staff knowledge of regulations and professionalism received the highest ranking, followed by provision of information/resources and consistency. Although written communication received the lowest ranking, it is important to remember that respondents were required to put answer choices in order. Results do not necessarily imply a deficiency in written communication. In addition, positive feedback was received for questions referring to written reports. Furthermore, it is currently unclear what aspects of written communication prompted the low ranking. SNHD is aware that improvements would be beneficial and is currently working to update the website and guidance documents.

Next Steps:

Due to the overwhelmingly positive feedback from November 2017 to September 2018, specific training for staff was not identified. General communication training was provided to all EH staff July 20, 2018 by Michéle Samarya-Timm (REHS, Masters Certified Health Education Specialist) and focused on improving staff members' abilities to express themselves while performing routine risk-based inspections.

The customer satisfaction survey will transition from the Food Operations program to Solid Waste and Compliance programs (Permitted Disposal Facilities, Restricted Waste Management, Public Accommodations, and Mobile Home Parks) in January 2019.

Standard 7: Industry and Community Relations
Self-Assessment Worksheet

It is necessary to maintain records of the Industry and Consumer Interaction forums and of the Educational Outreach activities over the most recent five-year period. The following chart is used to document that status. Meeting minutes, agendas, by-laws, charters, membership criteria and lists, frequency of meetings, roles, performed actions and documentation of food safety educational efforts are to be maintained by the regulatory authority.

PART I – Industry and Consumer Interaction Forums

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
Three Square	N/A	N/A	See roster	2/25/15	Presentation and discussion to the local food bank on safe food handling practices for their pantries. Almost 200 attendees.
NvRA Industry Meeting	See sign in sheet	See sign in sheet		5/27/15	SNHD presentation on new hire training and EHS Standardization.
Three Square	N/A	N/A	See roster	6/24/15	Presentation and discussion to the local food bank's pantries by popular demand, repeat of information 2/25/15.
NFSTF Meeting	See minutes	See minutes	See roster	9/2/15	See agenda: presented survey results from July conference. Almost 100 attendees, 27 participated in the survey and almost all the feedback was positive.
NFSTF Meeting	See minutes	See minutes	See roster	10/23/15	See agenda: Discuss venue expenses for the workshop at the Las Vegas South Point Hotel Casino & Spa from April 12-13, 2015. Concern was raised in regard to granting CEU's to participants, etc.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
NFSTF Meeting	See minutes	See minutes	See roster	1/14/16	Call to order and verify quorum, intro to all members, approve minutes from last meeting, 2016 conference, elections, open floor to new business, schedule next meeting,
Laughlin Industry Meeting	SNHD: Rose Henderson, Tamara Giannini, Ellen Spears, Peggy Suiter, Tina Gish, Karla Shoup, Miki Sakamura-Low, Jennifer Johnson, Christian DeHaan	See sign in sheet		2/2/16	The meeting included two SNHD presentations regarding 2015 progress with food facilities actively participating in risk based inspections and skills to build upon for 2016, to include continued communication, especially during imminent health hazard situations. Also time for industry questions and answers.
Cahlan Elementary School Career Day	Richard Ryu, Marissa Stanley		>90 Elementary School kids	2/26/16	20 minute presentations to four classrooms consisting of 30 – 45 students in each class. The presentation covered Food Safety topics: FBI symptoms, proper handwashing with a glo-germ demonstration, food holding temperatures and the temperature danger zone, information on how to become a food inspector, and a typical day as a food inspector.
Food Safety Partnership Meeting	Jackie Reszetar, Christine Sylvis, Carol Culbert, Tamara Giannini, Larry Rogers, Robert Urzi	See sign in sheet		3/14/16	See announcement: SNHD presented on Temporary Food Establishment requirements and the Administrative Process as well as an update on catering from the previous meeting followed by questions and answer period.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
Las Vegas Science & Technology Festival @ Hard Rock Hotel & Casino – Tasty Science	Mikki Knowles Tom Sheffer Jason Banales Larry Rogers	N/A	Online Registration via www.SciFest.vegas	5/3/16 6:30p-8:00p	Interactive demonstrations with attendees using Glo Germ Powder to demonstrate the transmission of germs by shaking hands. Also, used portable hand sinks to demonstrate and educate on proper hand washing. Created a poster board and educational dance to demonstrate the five symptoms of food borne illness. Handed out educational materials on "Wash your Hands" & "Washing the Hand is the Plan: Stop Germs"
Las Vegas Science & Technology Festival @ Cashman Center in the Cultural Corridor	Mikki Knowles Tom Sheffer Jason Sheffer Larry Navarrete Chrissy Lin Melissa Rascon Tanja Baldwin	N/A	Free Admission open to the general public	5/7/16 10:00a-5:00p	Interactive demonstrations with attendees using Glo Germ Powder to demonstrate the transmission of germs by shaking hands. Also, used portable hand sinks to demonstrate and educate on proper hand washing. Created a poster board with the five symptoms of food borne illness and educated attendees on them as they came to the booth Handed out educational materials on "Wash your Hands" & "Washing the Hand is the Plan: Stop Germs"
NRA Industry Meeting	SNHD: Rose Henderson, Heather Hanoff, Larry Rogers, Aaron DelCotto, Christine Sylvis	See sign in sheet		5/9/2016	Question and Answer session
NFSTF Meeting	See minutes	See minutes	See roster	6/23/16	2 different logo ideas and the board is open to comments or submission of other logos, final submissions date is 8/1/16.
Food Safety Partnership Meeting	SNHD: Rose Henderson, Heather Hanoff, Christine Sylvis, Karla Shoup	See sign in sheet		6/27/16	SNHD presented on How to Navigate the SNHD Website and Good Management Practices: How Facility Maintenance Impacts Your Inspection Grade followed by a period for questions and answers.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
NFSTF Meeting	See minutes	See minutes	See roster	8/4/16	Social media accounts, NFSTF Logo, plan conference for April 2017. Vote temporary chair, plan next meeting in September.
Food Safety Partnership Meeting	SNHD: Jackie Reszetar, Rose Henderson, Heather Hanoff, Christine Sylvis,	See sign in sheet		9/12/16	Food Safety Partnership Meeting. See announcement: SNHD presented on Risk Factor Study Results, Handwashing Intervention Strategy planning followed by questions and answer period.
NFSTF Meeting	See minutes	See minutes		9/15/16	Review Quotes and Proposals, location. Budget, $8613 from the NFSTF grant that can be used for audio visuals, publication materials, and travel. All funds spent must be approved and have receipts.
Laughlin Industry Meeting	See sign in sheet	See sign in sheet		9/29/16	Laughlin Industry Meeting
NFSTF Meeting	See minutes	See minutes	See roster	1/20/17	See agenda: updates for 2017 conference. Changes to Bylaws Discussion. Elections: Lead Chair, Academia, Regulatory, Industry, Secretary, Treasurer. New business, Q&A.
Food Safety Partnership Meeting	See sign in sheet	See sign in sheet	See sign in sheet	2/6/17	Get the Message… WASH YOUR HANDS!" Hand washing intervention strategy, Changes in Backflow Certificates, Food Establishment Recordkeeping, Website Updates, Q&A
Food Safety Partnership Meeting	See sign in sheet	See sign in sheet	See sign in sheet	4/3/17	Foodborne Illness Testimonials, Food Allergens, SNHD Social Media Campaign, Training Updates, Q&A
NFSTF Meeting	See minutes	See minutes	See roster	4/12/17	Change of roles in financial report. Suggestion made that a motion is needed to change the bylaws to incorporate a membership fee. Q&A.
Food Safety Partnership Meeting	Missing sign in sheet	See sign in sheet	See sign in sheet	5/22/17	Introductions, Inspection Forms, Risk Categories, Square Footage.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	7/24/17	Dogs on Patio Waiver, Using Time as a Public Health Control, Imminent Health Hazards, Training Updates. Q&A.
NFSTF Meeting	See minutes	See minutes	See roster	8/11/17	See agenda: plan 2018 conference location, budget, speakers, community participation. Q&A
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	8/23/17	Introductions, Risk Categories, Special Events, Questions & Answers, Closing.
NFSTF Meeting	See minutes	See minutes	See roster	9/15/17	See agenda: conference location, vendors, budget, speakers, community participation, program, marketing, plan for 2019 conference. Q&A.
Reclamation Safety Fair 2017	SNHD: Jason Banales, Mikki Knowles		Bureau of Reclamation employees	10/12/17	SNHD Interactive booth to promote proper handwashing with demonstration. Provide Public Health Handouts.
NFSTF Meeting	See minutes	See minutes	See roster	10/13/17	See agenda: Mission Statement and Goals. Administrative Proposal – Nevada Restaurant Association. Membership fees. Plan for 2018 conference. Q&A.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	10/16/17	Welcome & Director Briefing, Introductions, Food Ops Leadership, Contingency Plans, Roast Cooking Handout, Q&A.
NFSTF Meeting	See minutes	See minutes	See roster	12/15/17	See agenda: brief of 2018 conference and treasurer's report. Q&A.
NFSTF Meeting	See minutes	See sign in sheet	See roster	1/19/18	Poster presentation contest discussed & postponed due to time. Discuss possibility for next year. More speakers & vendors needed for this year's conference. Treasurer's report, Q&A, schedule next meeting.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	1/29/18	Director Briefing, Foodborne Illness, Investigations, Food Ops Leadership, Annual Itinerant Grade Card, Q&A.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	1/31/18	Introductions, Food Ops Leadership/Training, Imminent Health Hazards, Epidemiology, Q & A.
NFSTF Meeting	See minutes	See minutes	See roster	2/9/18	Membership discussion: roster, dues. Discuss grant changes. Brainstorm session: objectives for 2018-prupose of task force. Q&A, plan next meeting.
NFSTF Meeting	See minutes	See minutes	See roster	3/7/18	Membership discussion: roster, dues, affiliations. Grant changes. See agenda for conference discussion. Brainstorm session. Q&A. Plan next meeting.
NFSTF Meeting	See minutes	See sign in sheet	See roster	3/15/18	See agenda: brief of 2018 conference and treasurer's report. Q&A. Plan next meeting.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	3/29/18	Staff Introduction, Foodborne Illness Investigations, Hot Topics, Q&A.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	4/23/18	Director Briefing, Food Ops Leadership/Training Food Ops Updates, Foodborne Illness Investigation Data Analysis Infographic, Q & A.
Food Safety Partnership Meeting	See minutes	See minutes	See roster	4/23/18	Brief review Reno Meeting notes. Financial Report. BOD membership (committees). Review of NFSTF bylaws – propose changes. Website and marketing update. Membership dues. Q&A.
NFSTF Meeting	See minutes	See sign in sheet	See roster	4/25/18	Discussion on Vision for 2019 and beyond including community, schools, manufacturing, etc. Expand membership. Ideas for 2019 conference theme. Special projects and funding. Q&A. Plan next meeting.
Las Vegas Science & Technology Festival @ Cashman Center in the Cultural Corridor	Mikki Knowles Tom Sheffer Jason Sheffer Larry Navarrete Chrissy Lin Melissa Rascon Tanja Baldwin	N/A	Free Admission open to the general public	5/5/18	Interactive demonstrations with attendees using Glo Germ Powder to demonstrate the transmission of germs by shaking hands. Also, used portable hand sinks to demonstrate and educate on proper hand washing.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
NFSTF Meeting	See minutes	See sign in sheet	See roster	5/18/18	See agenda: brief on conference, any improvements? Discuss possible changes to bylaws. Decide membership fees. Plan for 2019 Conference – determine committees. Projects and Scholarships – grant funding. Treasurer's Report. Q&A. Plan next meeting.
NFSTF Meeting	See minutes	See sign in sheet	See roster	7/13/18	See agenda: amend bylaws. Discuss task force email address. Plan for 2019 conference. Financial Report. Q&A. Plan next meeting.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	7/23/18	Customer Satisfaction Survey, Allergy Intervention Strategy, Food Handler Card Testing, FBI Update/Emetic Events, Training Updates, Q&A.
Southern Nevada Food Council	SNHD: Allison Schnitzer, Christine Sylvis	See sign in sheet	See sign in sheet	8/23/18	SNHD: CCSD School District Wellness Policy, Healthy Hunger Free Kids Act of 2010 required Nutrition and Physical Activity Standards be put into place through school wellness policy. Described CCSD Mobile Salad bars in schools. Thirteen schools are getting the salad bar on a regular once a month schedule.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	9/6/18	Food Handler Safety Training Cards, Emetic Events, Training Updates, Customer satisfaction survey, Allergy intervention planning, Videos, Q & A.
NFSTF Meeting	See minutes	See sign in sheet	See roster	9/11/18	Brief of Financial Report including financial situation from April Conference and Scott info. Food Truck Training. NFSTF Bylaws. Membership fee. Thermometers/FDA Card/Labels. Speakers / Conference. NFSTF – education opportunities. Q&A. Plan next meeting.
NFSTF Meeting	See minutes	See sign in sheet	See roster	10/9/18	Discussion of communications – schedule and partnership. Food Truck Training. NFSTF Bylaws Revision. Membership fee – 2019 Conference. Scholarships – poster contest. Thermometers / FDA Card / Labels. NFSTF – Education Opportunities. Treasurer's Report. Q&A. Plane next meeting.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
Food Safety Partnership Meeting	Missing sign in sheet	See sign in sheet	See sign in sheet	10/22/18	New Environmental Health Specialists, Liquid Nitrogen in Food, Pest Occurrences and Control, FDA Menu Labeling Rule, Temporary Food Establishment Video, Q&A.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	11/7/18	Environmental Health Presentation: Consumer health programs, solid waste programs, food operations. Q&A.
NFSTF Meeting	See minutes	See sign in sheet	See roster	11/13/18	Review bylaws. Discuss status of the convention. Updated and financial reports. Q&A. Schedule next meeting.
NFSTF Meeting	See minutes	See sign in sheet	See roster	12/11/18	See agenda: brief last meeting 11/13/2018. Discuss status of Convention – communications with NEHA. Projects – think tank. Financial Report. Cards, Newsletter. Videos, grants. Q&A. Plan next meeting.
NFSTF Meeting	See minutes	See minutes	See roster	1/13/19	See Agenda: Speaker * Jon Anneson of Seahawk Systems. 2020 NFSTF and NvEHA Joint Conference Planning. Board Updates. Plan Next meeting.
NFSTF Meeting	See minutes	See sign in sheet	See roster	1/22/19	Discuss status of convention-Communication with NvEHA. Year in Review: projects, status, next action. Website/social media-person in charge absent. Q&A, schedule next meeting.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	1/28/19	EH Leadership Team, FBI 2018 Year in Review, Allergy Awareness Campaign, CBD, EH Updates, Q&A.
Laughlin Industry Meeting	See sign in sheet	See sign in sheet		3/13/19	Presentations on Imminent Health Hazards and Other Emergency Situations, Allergy Intervention, and CBD. Also, Q&A.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	4/4/19	Imminent Health Hazard Photos, CBD, Pest Control, EH Updates, Q&A.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	4/29/19	Boil Water Orders, Service Animals, Indoor Grease, Interceptors, EH Updates, Q&A.
NFSTF Meeting	See minutes	See minutes	See roster	6/17/19	Review 2019 Elections: Treasurer and Secretary. Discuss Amendments to the NFSTF ByLaws. Outreach Programs. Upcoming trainings. Updates on Academic Report. Discuss status of Convention – Communications with NvEHA. Year in Review: Projects, status, next action. Q&A. Plan next meeting.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	7/22/19	EH Leadership Team,Director/Manager Update, Recycling, Website Updates, FERL, Food Handler Videos, EH Updates, Outbreak Prevention and Response Conference, Q&A.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	10/3/19	Food Safety Resource Updates, Service Animals, Employee Health Policy, Outbreak Prevention for Hotels and Casinos, Q&A.
NFSTF Meeting	See minutes	See minutes	See roster	10/21/19	See agenda. Board updates. 2020 elections. 2020 NFSTF and NvEHA Joint Conference Planning. Discuss new business. Schedule next meeting.
Southern Nevada Food Council	SNHD: Allison Schnitzer, Christine Sylvis	See sign in sheet	See sign in sheet	10/24/19	SNHD: REACH SNFC Year 2 Sponsorship, Year two-funding to SNFC $17,000, Focus group update, Reach Zip codes and low-income census tracts in Henderson, Includes nutrition, tobacco and other strategies, Diversify SNFC, Expand SNAP/EBT offerings at Farmers Markets.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	10/28/19	How to Print Your Health Permit, SNHD Standardization Program Overview, Changes to Mobile and Illegal Vending Programs, EH Updates, Q&A.
Food Safety Partnership Meeting	See minutes	See sign in sheet	See sign in sheet	11/19/19	Service Animals and Food Establishments, SNHD Standardization Program Overview, Illegal Food Vendors, EH Updates, Q&A.

Forum Title	Regulatory Participants by Organization	Industry Participants by Organization	Consumer Participants by Organization	Meeting Dates	Summary of Activities Related to Control of Risk Factors
NFSTF Meeting	See minutes	See minutes	See roster	12/2/19	Brief on board updates. 2020 NFSTF and NvEHA Joint Conference Planning. 2020 Elections. Plan next meeting.
NFSTF Meeting Saved as 2/13, doc 1/13	See minutes	See sign in sheet	See roster	1/13/20	Discussed upcoming 2020 NvEHA/NFSTF Conference. Elections, Nominations for Lead Chair, Manufacturing Chair, Regulatory Chair, Academic Chair, Secretary, Treasurer. Update Member Registration / Contact Information. Q&A Plan next meeting.
Food Safety Partnership Meeting	See sign in sheet	See sign in sheet	See sign in sheet	1/27/20	Introductions (EH Leadership Team)., Sanitizer Solutions: A Guide for Industry (Stephanie Hernandez), 3 Compartment Sinks (Rachel Flores/Rabea Sharif), EH Updates (Christine Sylvis), Q&A
NFSTF Meeting	See sign in sheet	See sign in sheet	See roster	2/3/20	Brief of upcoming 2020 NvEHA/NFSTF Conference. Elections. Open Floor for New Business to discuss. Plan next meeting.

Standard 7: Industry and Community Relations
Self-Assessment Worksheet

It is necessary to maintain records of the Industry and Consumer Interaction forums and of the Educational Outreach activities over the most recent five-year period. The following chart is used to document that status. Meeting minutes, agendas, by-laws, charters, membership criteria and lists, frequency of meetings, roles, performed actions and documentation of food safety educational efforts are to be maintained by the regulatory authority.

Standard 7: Industry and Community Relations
Self-Assessment Worksheet

PART II – Educational Outreach

Dates	Summary of Activities
02/26/2015	Annual food safety training in English at Three Square nearly 200 people showed up.
06/24/2015	Annual food safety training in English at Three Square, about 60 people showed up.
12/14/2015	Annual food safety training in Spanish for management and food handlers (53) of all 4 Mariana's Supermarkets locations.
02/26/2016	Food safety training in English to CCSD for elementary school students centered on Food Safety topics: FBI symptoms, Proper handwashing with a glo-germ demonstration, Food holding temperatures and the temperature danger zone, information on how to become a food inspector, and a typical day as a food inspector. Four classrooms consisting of 30 – 45 students.
03/08/2016	Food safety training in English for food handlers (170) from The Flamingo Hotel & Casino, The Cromwell Hotel & Casino and at The LINQ.
03/10/2016	Food safety training in Spanish for food handlers (122) from The Flamingo Hotel & Casino, The Cromwell Hotel & Casino and at The LINQ.
03/24/2016	Food safety training in Spanish for food handlers (144) from The Flamingo Hotel & Casino, The Cromwell Hotel & Casino and at The LINQ.
03/28/2016	Food safety training in English for food handlers (268) from The Flamingo Hotel & Casino, The Cromwell Hotel & Casino and at The LINQ.
04/25/2016	Food safety training in Spanish for food handlers (16) from Leticia's Cocina.
05/09/2016	Annual food safety training in English at SNHD Red Rock Conference room. 25 showed up for the industry meeting.
06/02/2016	Food safety training to CCSD Zoom University, a summer program for middle school students centered on Culinary Arts. 375 students were trained over 8 classes.
06/27/2016	Annual food safety training in English at SNHD Red Rock Conference room. 24 showed up for the meeting.
09/12/2016	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 26 attendees; Spanish training – 10 attendees.

Dates	Summary of Activities
02/06/2017	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 31 attendees; Spanish training – 20 attendees.
02/24/2017	Food safety intervention training provided for 3 food handlers at Kimchi Restaurant at Gold Key Shops, 3049 S. Las Vegas Blvd, Las Vegas.
03/23/2017	Food safety intervention training provided in Spanish for 3 food handlers at Fausto's Mexican Grill #1, 2654 W. Horizon Ridge Parkway, Henderson, NV.
03/24/2017	Food safety intervention training provided in English for 5 food handlers at Mint Indian Bistro, 730 E. Flamingo Suite 10 Las Vegas.
4/3/2017	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 9 attendees; Spanish training – 8 attendees.
04/05/2017	Food safety intervention training provided in Spanish for 5 food handlers at Tacos Mexico, 1800 S Las Vegas Blvd, Las Vegas.
04/14/2017	Food safety intervention training provided in English for 2 food handlers at Pad Thai Restaurant, 860 S Rancho #2, Las Vegas.
04/20/2017	Food safety intervention training provided in English for 3 food handlers at Pizza N Pizza, 3840 S Maryland PKWY.
04/25/2017	Food safety intervention training provided in English for 4 food handlers at India Masala. Owner failed to show for conference.
05/03/2017	Food safety intervention training provided in English for 3 food handlers at NV Youth Football League Snack Bar, 1551 S Buffalo, Las Vegas.
05/04/2017	Food safety intervention training provided in Spanish for 3 food handlers at El Pollo Mobile, 410 E Lake Mead, Las Vegas
05/10/2017	Food safety intervention training provided in Spanish for 5 food handlers at Taqueria El Buen Pastor Pusf, 2400 S Las Vegas, Las Vegas
05/11/2017	Food safety intervention training provided in Spanish for 5 food handlers at Tacos El Autlense, 2162 N Lamb, Las Vegas.
05/15/2017	Food safety intervention training provided in English for 2 food handlers at Little City Grille, 825 Nevada HWY, Boulder City, NV.
05/16/2017	Food safety intervention training provided in Spanish for 6 Food handlers at the conference at Los Molcajetes, 1553 N Eastern, Las Vegas.
06/09/2017	Food safety intervention training provided in Spanish for 3 Food handlers at Cantina Cancun Bar & Grill, 5006 S Maryland PKWY.
06/09/2017, 6/12/2017, 6/13/2017	Food safety training to CCSD Zoom University, a summer program for middle school students. 350 students were trained over eight classes on two days.
06/09/2017	Food safety intervention training provided in English for 2 food handlers at India Palace Restaurant, 505 E Twain Ave.

Dates	Summary of Activities
06/13/2017	Food safety intervention training provided in English for 2 food handlers at Chai Tip's Thai Chinese Food, 3925 N Martin Luther King Blvd, North Las Vegas, NV.
06/13/2017	Food safety intervention training provided in Spanish for 3 food handlers at San Salvador Restaurant, 6651 Smoke Ranch, Las Vegas
06/19/2017	Food safety intervention training provided in Cantonese for 5 food handlers at KJ Kitchen Chinese Cuisine, 5960 Spring Mountain Rd 1D.
06/20/2017	Food safety intervention training provided in English for 4 food handlers at Romano's Macaroni Grill located on 2400 W Sahara.
06/21/2017	Food safety intervention training provided in Spanish for 3 food handlers at Cocoz Frioz located on 4425 E Stewart.
07/06/2017	Food safety intervention training provided in Spanish for 3 food handlers at Roberto's Taco Shop, 10612 S Eastern, Henderson, NV.
07/07/2017	Food safety intervention training provided in English for 2 food handlers at Axum Ethiopian Restaurant. 860 E Twain.
07/10/2017	Food safety intervention training provided in English for 3 food handlers, 1 Intern, 1 REHS II at China Sky Chinese and Sushi, at 2520 E Craig Rd #100, North Las Vegas, NV
07/11/2017	Food safety intervention training provided in Spanish for 6 food handlers at Mariscos El Puerto, 1901 N Decatur.
7/24/2017	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 5 attendees; Spanish training – 4 attendees.
08/08/2017	Food safety intervention training provided in English for 3 food handlers at Asian Wok, 6515 N Buffalo, Las Vegas.
08/08/2017	Food safety intervention training provided in English for 3 food handlers at Food Express located on 2003 S Decatur.
08/10/2017	Food safety intervention training provided in English for 2 food handlers at Thai Seafood Ginger, 1750 S Rainbow, Las Vegas.
08/15/2017	Food safety intervention training provided in English for 3 food handlers at Mr. Sandwich III, 4626 S Maryland Pkwy.
08/22/2017	Food safety intervention training provided in English for 3 food handlers at M&M Soul Food Café, 2211 S Las Vegas Blvd, Las Vegas.
08/23/2017	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 24 attendees.
08/23/2017	Food safety intervention training provided in English for 7 food handlers at Cutting Board, 2131 Rock Springs Dr.
09/12/2017	Annual food safety training in English for management and food handlers (19) at Vegenation located at 618 E Carson, Las Vegas, NV
09/14/2017	Food safety intervention training provided in English for 4 food handlers, 1 EHS Trainee, at Kaizen Fusion Roll & Sushi
09/15/2017	Food safety intervention training provided in English 3 food handlers, 1 REHS Trainee at China Joe's #1 located a 6126 W Lake mead Blvd.
09/18/2017	Food safety intervention training provided in Mandarin for 3 food handlers at Food to Homes, 4730 Spring Mountain Rd #B.
09/21/2017	Food safety intervention training provided in English for 5 food handlers, 1 EHS Trainee at the conference at Ricardo's Restaurant.

Dates	Summary of Activities
09/22/2017	Food safety intervention training provided in English for 3 food handlers at Rebel Republic Snack Bar, at 3540 W Sahara.
10/04/2017	Food safety intervention training provided in Spanish for 3 food handlers at Tacos La Mexicana, 3675 S Decatur.
10/09/2017	Annual food safety training in English for management and food handlers (27) at Blondies at Miracle Mile located at 3663 S Las Vegas Blvd, Las Vegas.
10/16/2017	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 7 attendees; Spanish training – 3 attendees.
10/22/2017	Annual food safety training in English for management and food handlers (13) at Los Cucos, 7315 Arroyo Crossing Pkwy.
10/26/2017	Food safety intervention training provided in Spanish for 5 food handlers at Roberto's Taco Shop, 1645 Nevada Hwy, Boulder City, NV
10/30/2017	Food safety intervention training provided in Spanish, Vietnamese for 4 food handlers at Kinh Do, 4300 Spring Mountain Rd.
10/31/2017	Food safety intervention training provided in English for 5 food handlers at Teriyaki Boy Healthy Grill, 4441 E Bonanza Rd, Las Vegas.
11/02/2017	Food safety intervention training provided in Spanish for 6 food handlers at Mexican Grill El Nopal, at 2000 S Las Vegas Blvd, Las Vegas.
11/08/2017	Food safety intervention training provided in Korean for 2 food handlers, 1 EHS II was present as well at Jin Mee Restaurant at 953 E Sahara Ave, Las Vegas.
11/15/2017	Food safety intervention training provided in Mandarin for 3 food handlers at Four Seasons Diner at 4215 W Spring Mountain Rd.
11/27/2017	Food safety intervention training provided in Mandarin for 3 food handlers at Krazy Buffet, at 8095 W Sahara.
11/30/2017	Food safety intervention training provided in English for 2 food handlers at Ono's Island BBQ Pusf, located at 5740 W Charleston.
12/04/2017	Food safety intervention training provided in Spanish for 5 food handlers at Las Islena market.
12/05/2017	Food safety intervention training provided in English for 3 food handlers at Stacks & Yolks, 7150 S Durango.
12/06/2017	Food safety intervention training provided in Spanish for 9 food handlers at Rincon Catracho, 4110 S Maryland Pkwy, Las Vegas.
12/07/2017	Food safety intervention training provided in English for 2 food handlers at Anise Tapas and Grill, 3100 S Durango.
12/11/2017	Food safety intervention training provided in English for 2 food handlers at Nigerian Cuisine, 5006 S Maryland Pkwy.
12/12/2017	Food safety intervention training provided in Thai for 3 food handlers at Thai House Restaurant, 9850 S Maryland Pkwy.

Dates	Summary of Activities
12/14/2017	Food safety intervention training provided in English for 2 food handlers at Vickie's Diner, 1700 S Las Vegas Blvd, Las Vegas.
12/18/2017	Food safety intervention training provided in English for 2 food handlers at Puerto Rico Express, 1516 S Las Vegas, Las Vegas
12/20/2017	Food safety intervention training provided in English for 4 food handlers at Kusina Ni Lorraine II, 3275 W Ann Rd, North Las Vegas, Las Vegas.
01/05/2018	Food safety intervention training provided in English for 5 food handlers at Kainan Asian Market and Gift Shop, 9620 S Las Vegas Blvd N2-3, Las Vegas
01/09/2018	Food safety intervention training provided in English for 10 food handlers at Peggy Sue's, 380 N Sandhill Blvd. Mesquite, NV.
01/11/2018	Food safety intervention training provided in Spanish for 11 food handlers at Cardenas Restaurant, 4700 Meadow LN,
01/22/2018	Food safety intervention training provided in Cantonese for 3 food handlers at RICE TO GO, 4840 SPRING MOUNTAIN Rd.
01/26/2018	Food safety training in Spanish for management and food handlers (22) of 2 trainings, one in AM and 1 in PM at Cardenas Market, 4421 E Bonanza
01/29/2018	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 34 attendees; Spanish training – 6 attendees.
01/30/2018	Food safety training in Spanish for management and food handlers (16) of 2 trainings, one in AM and 1 in PM at Cardenas Market, 4421 E Bonanza
02/01/2018	Food safety intervention training provided in English for 3 food handlers at Coffee Pub, 2800 W Sahara, Las Vegas.
02/02/2018	Food safety training in Spanish for management and food handlers (8) at Cardenas Market, 4421 E Bonanza
02/08/2018	Food safety intervention training provided in Mandarin for 3 food handlers at Ticki's Hawaiian BBQ, 8460 Farm #110, Las Vegas.
02/09/2018	Food safety intervention training provided in English for 2 food handlers at Sushi Way, 3900 Paradise Rd, Las Vegas.
02/27/2018	Annual Itinerant Workshop – a review of requirements and common issues found at AIs. (A few people missed the sign in sheet so the number is short by 3, for a total of 16.) The workshop overall went very well, it took about an hour (45 minutes of presentation and 15 minutes of questions.) The questions were general about food safety and AI specific concerns. We even had a business owner who was interested in obtaining an AI permit connect with Desiree from FDAP.
03/02/2018	Food safety intervention training provided in English for 3 food handlers at Paris Baguette Snack Bar, 3377 S Las Vegas Blvd, Las Vegas.
03/08/2018	Food safety intervention training provided in English for 5 food handlers at Bachi Burger, 470 E Windmill Ln.

Dates	Summary of Activities
03/15/2018	Food safety intervention training provided in English for 5 food handlers at Kusina Ni Lorraine, 4343 Rancho, Las Vegas.
03/26/2018	Food safety intervention training provided in English for 5 food handlers at Café Aquarius, 1900 S Casino Dr., Laughlin, NV.
03/27/2018	Food safety intervention training provided in English for 7 food handlers at Santa Fe Mining CO, at 5021 N Rainbow Blvd, Las Vegas.
03/29/2018	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 5 attendees; Spanish training – 0 attendees.
04/03/2018	Food safety intervention training provided in English for 2 food handlers at Greens and Grill, 840 S Rancho Dr. Las Vegas.
04/10/2018	Food safety training in English for management and food handlers (4) at J & R Southern Fried Chicken, 870 Sierra Vista Dr.
04/16/2018	Food safety training in Spanish for management and food handlers (10) at Los Cucos Mexican Café 7315 Arroyo Crossing Pkwy.
04/19/2018	Food safety intervention training provided in Spanish for 4 food handlers at Taco Y Taco Mexican Eatery, 9470 S Eastern Ave
04/20/2018	Food safety intervention training provided in English for 4 food handlers at Café Zupas at 9460 S Eastern, Las Vegas.
04/23/2018	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook
05/01/2018	Food safety intervention training provided in Mandarin for 4 food handlers at L&L Hawaiian BBQ at 7320 S Rainbow
05/15/2018	Food safety intervention training provided in English for 3 food handlers at Buckman's Restaurant Revere Golf Club, 2600 Hampton Rd, Henderson, NV
05/23/2018	Food safety training in English for management and food handlers (37) at Revere.
05/24/2018	Food safety intervention training provided in Spanish for 5 food handlers at El Steak Burrito, 4590 Spring Mountain Rd.
05/25/2018, 05/29/2018	Food safety training to CCSD Zoom University, a summer program for middle school students with a total of 480 students that were trained over 12 classes, 2 classes per school, there were 6 schools on two days.
05/30/2018	Food safety intervention training provided in Spanish for 22 food handlers at Havana Express, at 2590 E Tropicana.
06/04/2018	Food safety intervention training provided in English for Mobile Vendor Workshop 20 food handlers at SNHD Red Rock Conference Room.
06/06/2018	Food safety intervention training provided in English for 6 food handlers at CAPITAL GRILLE @ FASHION SHOW.
06/11/2018	Food safety intervention training provided in English for 7 food handlers at DESERT SANDS RV PARK RESTAURANT, at 1940 N BOULDER HWY, Henderson, NV.
06/15/2018	Food safety intervention training provided in Spanish for 10 food handlers at TAQUERIA EL BUEN PASTOR PUSF at 645 Fremont St, Las Vegas, NV

Dates	Summary of Activities
06/27/2018	Food safety intervention training provided in English for 3 food handlers at Airport Café 4935 PALO VERDE Rd, Las Vegas, NV.
07/02/2018	Food safety intervention training provided in English for 7 food handlers at SUGAR FACTORY at 3200 S LAS VEGAS Blvd, Las Vegas, NV
07/13/2018	Food safety intervention training provided in English for 3 food handlers at Kapit Bahay at 4115 Spring Mountain Rd, Las Vegas, NV.
07/17/2018	Food safety intervention training provided in Spanish for 4 food handlers at OLOCUILTA PUPUSERIA AND NEVERIA at 1756 E CHARLESTON.
07/19/2018	Food safety intervention training provided in Spanish for 6 food handlers at Makino at 3965 S Decatur, Las Vegas, NV.
07/23/2018	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training –27 attendees; Spanish training – 3 attendees.
07/24/2018	Food safety training provided in English for 10 food handlers at El Triunfo.
07/27/2018	Outreach training for 9 food handlers at Shade Tree shelter.
07/30/2018	Food safety intervention training provided in English for 3 food handlers at HALO RESTAURANT aka LIV, aka RENDEZVOUS at 2605 S DECATUR.
08/03/2018	Food safety intervention training provided in English for 4 food handlers at BALBOA PIZZA COMPANY at 2265 VILLAGE WALK, Henderson, Nevada.
08/07/2018	Food safety intervention training provided in Spanish for 3 food handlers at SAN SALVADOR RESTAURANT 6651 SMOKE RANCH.
08/14/2018	Food safety intervention training provided in English for 4 food handlers at SAKANA RESTAURANT 3949 S MARYLAND PKWY.
08/14/2018	Annual food safety training provided in English for 21 food handlers at Makino at 3965 S Decatur, Las Vegas, NV.
08/15/2018	Food safety intervention training provided in Spanish for 6 food handlers at PACHUCA HIDALGO CATERING #2 at 280 S Decatur.
08/23/2018	Food safety intervention training provided in English for 3 food handlers at NAPOLI PIZZERIA at 1275 W WARM SPRINGS RD, Henderson, NV.
08/27/2018	Food safety intervention training provided in Vietnamese for 2 food handlers at PHO THANH HUONG SANDWICH at 1131 E TROPICANA.
08/28/2018	Food safety intervention training provided in English for 2 food handlers at ROCCO'S NY PIZZA & PASTA at 6870 S RAINBOW.
09/05/2018	Food safety intervention training provided in English for 2 food handlers at KING & I #1 at 1170 E TROPICANA.
09/11/2018	Annual food safety training provided in English for 2 food handlers at Sakana at 3949 S Maryland Pkwy, Las Vegas, NV.
09/12/2018	Food safety intervention training provided in Spanish for 1 food handler at CHERRY BERRIES at 2405 S EASTERN, Las Vegas, NV.

Dates	Summary of Activities
09/18/2018	Food safety intervention training provided in English for 1 food handler at ANTHONY'S TRATTORIA at 1312 NEVADA HWY, Boulder City, NV.
09/20/2018	Food safety intervention training provided in Korean for 3 food handlers at POKE POKU at 116 N STEPHANIE St, Henderson, NV.
09/21/2018	Food safety intervention training provided in English for 4 food handlers at ROMANO'S MACARONI GRILL 573 N STEPHANIE St, Henderson, NV.
09/24/2018	Food safety intervention training provided in English for 2 food handlers at LA PUPUSA LOKA at 1956 E CHARLESTON.
09/25/2018	Food safety intervention training provided in English for 3 food handlers at HOT DOG ON A STICK at 3785 S LAS VEGAS, Las Vegas, NV.
09/27/2018	Food safety intervention training provided in English for 5 food handlers at LOLA'S at 241 W CHARLESTON.
09/28/2018	Food safety intervention training provided in Spanish for 5 food handlers at LOS CUCOS MEXICAN CAFÉ at 7315 ARROYO CROSSING.
10/01/2018	Food safety intervention training provided in English for 2 food handlers at SUNNY'S CHICKEN & FISH MARKET at 865 N LAMB, Las Vegas, NV.
10/03/2018	Food safety intervention training provided in Spanish for 4 food handlers at SOL TAPATIO at 3901 S MARYLAND.
10/16/2018	Food safety intervention training provided in Spanish for 4 food handlers at EL BUEN TACO #1 at 439 ROCK QUARRY ST, North Las Vegas, NV.
10/22/2018	Food safety training provided in Spanish for 13 food handlers at LOS CUCOS MEXICAN CAFÉ.
10/25/2018	Food safety intervention training provided in English for 4 food handlers at CHICKEN NOW at 7400 LAS VEGAS BLVD, Las Vegas, NV.
10/30/2018	Food safety intervention training provided in Mandarin for 2 food handlers at CHENGDU LAOZAO HOTPOT 5740 SPRING MOUNTAIN Rd.
10/31/2018	Food safety intervention training provided in English for 2 food handlers at PHO 87 at 3620 S JONES Blvd. Las Vegas, NV
11/01/2018	Food safety intervention training provided in English for 7 food handlers at Bootlegger Restaurant at 7700 S Las Vegas Blvd, Las Vegas, NV.
11/15/2018	Food safety intervention training provided in English for 4 food handlers at OYSTER BAY SEAFOOD AND WINE CAFÉ at 3663 S LAS VEGAS Blvd, Las Vegas, NV.
11/19/2018	Food safety intervention training provided in Spanish for 4 food handlers at GUATEMALA CITY BAKERY AND FAST FOOD at 3131 N RANCHO Dr., Las Vegas, NV.
11/21/2018	Food safety intervention training provided in English for 3 food handlers at DON MICHAELS RISTAURANTI at 4864 W LONE MOUNTAIN Rd, Las Vegas, NV.
11/26/2018	Annual food safety training provided in English for 4 food handlers at Kucara Makara at 4225 W Sahara, Las Vegas, NV.

Dates	Summary of Activities
11/27/2018	Food safety intervention training provided in English for 3 food handlers at CITY LV DETENTION CENTER at 3300 STEWART Ave, Las Vegas, NV.
11/28/2018	Food safety intervention training provided in English for 5 food handlers at CARRABBA'S ITALIAN GRILL at 10160 S EASTERN Ave, Henderson, NV.
12/03/2018	Food safety intervention training provided in English for 8 food handlers at LOTUS OF SIAM at 620 E FLAMINGO.
12/04/2018	Food safety intervention training provided in English for 4 food handlers at JUICY BEETS aka URBAN TURBAN at 3900 PARADISE
12/05/2018	Food safety intervention training provided in English for 3 food handlers at Brooklyn aka ROCCO'S NEW YORK DELI at 1181 S BUFFALO.
12/07/2018	Food safety intervention training provided in Spanish for 3 food handlers at TACOS EL SINALOENSE at 110 W ROLLY St, Henderson, NV.
12/10/2018	Food safety intervention training provided in English for 3 food handlers at SUSHI CAFE at 237 N STEPHANIE St, Henderson, NV.
12/13/2018	Food safety intervention training provided in Spanish for 4 food handlers at VIVA EL TACO at 30 N LAMB Blvd Las Vegas, NV.
12/18/2018	Food safety intervention training provided in English for 4 food handlers at MTO CAFE at 500 S MAIN St, Las Vegas, NV.
12/19/2018	Food safety intervention training provided in English for 2 food handlers at VINCE NEIL EAT, DRINK, PARTY at 360 E TROPICANA.
12/27/2018	Food safety intervention training provided in English for 4 food handlers at CANTERS DELI @ LINQ at 3535 S LAS VEGAS BLVD, Las Vegas, NV.
01/14/2019	Food safety intervention training provided in English for 3 food handlers at BOMBAY INDIAN CUISINE at 3049 S LAS VEGAS BLVD STE 15F, Las Vegas, NV.
01/15/2019	Food safety intervention training provided in Spanish for 2 food handlers at PLAYA PAPAGAYOS SEAFOOD RESTAURANT at 4760 W SAHARA.
01/22/2019	Food safety intervention training provided in Spanish for 7 food handlers at MERCADO RINCON DE BUENOS AIRES at 5300 SPRING MOUNTAIN Rd.
01/25/2019	Food safety intervention training provided in English for 1 food handler at DAKAO BAKERY DELI at 5700 W SPRING MOUNTAIN Rd.
01/28/2019	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training –14 attendees; Spanish training – 18 attendees.
02/13/2019	Food safety intervention training provided in Spanish for 4 food handlers at ANTOJITOS GUAYAVITOS MOBILE at 439 ROCK QUARRY Way, North Las Vegas, NV.
03/01/2019	Food safety intervention training provided in English for 4 food handlers at WEDGIES SPORTS BAR at 796 W PIONEER St, Las Vegas, NV.
03/12/2019	Food safety intervention training provided in Spanish for 4 food handlers at SANTIAGO'S TACO SHOP at 777 E TWAIN.

Dates	Summary of Activities
03/29/2019	Food safety intervention training provided in English for 3 food handlers at MAZA MEDITERANEAN GRILL at 2550 S RAINBOW.
04/02/2019	Food safety intervention training provided in Cantonese for 2 food handlers at SK SEAFOOD RESTAURANT at 5600 SPRING MOUNTAIN Rd.
04/09/2019	Food safety intervention training provided in English for 4 food handlers at ICHIZA at 4355 SPRING MOUNTAIN Rd.
04/19/2019	Food safety intervention training provided in English for 2 food handlers at CHINA ONE at 4990 W CRAIG Rd, Las Vegas, NV.
04/29/2019	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training –15 attendees; Spanish training – 14 attendees.
05/08/2019	Food safety intervention training provided in Thai for 5 food handlers at THAI D TO GO at 860 E TWAIN.
05/23/2019	Food safety intervention training provided in English for 2 food handlers at GIOVANNI'S HOLE IN THE WALL at 8125 W SAHARA.
05/28/2019	Food safety intervention training provided in English for 5 food handlers at IL MULINO NEW YORK at 3500 S LAS VEGAS, Las Vegas, NV.
06/05/2019	Food safety intervention training provided in English for 4 food handlers at CHINA ONE at 3955 S DURANGO.
06/13/2019	Food safety intervention training provided in English for 6 food handlers at KABOB N MORE at 3049 S LAS VEGAS BLVD, Las Vegas, NV.
06/24/2019	Annual food safety training provided in English for 25 food handlers at Los Lupes at 312 W. Mesquite Blvd. Suite #2, Mesquite, NV.
07/08/2019	Food safety intervention training provided in English for 7 food handlers at SMOKEY'S BISTRO at 2743 S LAS VEGAS, Las Vegas, NV.
07/18/2019	Food safety intervention training provided in English for 10 food handlers at Caesars Bacchanal Buffet at 3570 S Las Vegas Blvd, Las Vegas, NV.
07/22/2019	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training –4 attendees; Spanish training – 4 attendees.
07/23/2019	Food safety intervention training provided in Spanish for 3 food handlers at ISLA MEZCALTITAN at 701 N NELLIS BLVD, Las Vegas NV.
07/25/2019	Food safety intervention training provided in English for 3 food handlers at PALM VIETNAMESE FOOD TO GO at 3768 S MARYLAND PKWY.
07/29/2019	Food safety intervention training provided in Spanish for 10 food handlers at TAQUERIA EL BUEN PASTOR at 301 S Decatur Blvd.
07/30/2019	Food safety intervention training provided in Spanish for 9 food handlers at TAQUERIA EL BUEN PASTOR at 318 FREMONT ST.
08/13-14/2019	Foodborne Illness Outbreak Prevention and Response Conference (Controlling Risk. Preventing Illness). August 13-14, 2019 at Clark County Windmill Library at 7060 W. Windmill Ln., Las Vegas, NV.

Dates	Summary of Activities
08/20/2019	Food safety intervention training provided in English for 3 food handlers at MICHOACAN GOURMET MEXICAN RESTAURANT at 7870 W TROPICAL Parkway Las Vegas, NV.
08/21/2019	Food safety intervention training provided in English for 3 food handlers at SUSHI BOMB at 10470 W CHEYENNE Las Vegas, NV.
09/03/2019	Food safety intervention training provided in Spanish for 1 food handler at MARISCOS EL TAPATIO at 1195 E PYLE, Las Vegas, NV.
09/09/2019	Food safety intervention training provided in Mandarin for 3 food handlers at China a Go Go-Losee at 5960 LOSEE, North Las Vegas, NV.
09/10/2019	RIMS Western Regional Conference at JW Marriott Las Vegas Resort & Spa at JW 221 N Rampart Blvd, Las Vegas, NV. About 149 attendees.
09/11/2019	Food safety intervention training provided in English for 2 food handlers at SOFIA'S PIZZA at 5645 S EASTERN AVE 1, Las Vegas, NV.
09/12/2019	Food safety intervention training provided in Spanish for 3 food handlers at EL TENAMPA at 556 N EASTERN, Las Vegas, NV.
09/18/2019	Food safety intervention training provided in English for 2 food handlers at BO BO CHINA at 8465 W Sahara Ave.
09/19/2019	Food safety intervention training provided in English for 2 food handlers at MAMA'S PIZZERIA at 3030 S NEEDLES HWY, Laughlin, NV.
09/24/2019	Food safety intervention training provided in English for 7 food handlers at PARIS HOTEL & CASINO MAIN DISHROOM aka PARIS CAFÉ ST LOUIS DISHROOM aka PARIS GORDON RAMSAY STEAK RESTAURANT at 3655 S LAS VEGAS, Las Vegas, NV.
10/03/2019	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook.
10/04/2019	Food safety intervention training provided in Spanish for 4 food handlers at CARLITO'S CUBAN FOOD AND CAFETERIA at 115 N DECATUR.
10/23/2019	Food safety intervention training provided in English for 3 food handlers at THAI CUSINE at 601 N NELLIS, Las Vegas, NV.
10/28/2019	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training –24 attendees; Spanish training – 2 attendees.
10/29/2019	Food safety intervention training provided in Mandarin for 3 food handlers at #1 HAWAIIAN BARBECUE at 5870 LOSEE RD, North Las Vegas, NV.
11/12/2019	Food safety intervention training provided in Mandarin for 2 food handlers at CHENGDU TASTE at 3950 SCHIFF, Las Vegas, NV.
11/19/2019	Food safety intervention training provided in English for 2 food handlers at CORAL ACADEMY at 42 BEAR DR, Las Vegas, NV.
12/4/2019	Basic home food safety information presented to the Kiwanis Club of North Las Vegas during their December meeting at TGI FRIDAYS at 7300 N ALIANTE PKWY, North Las Vegas, NV. Holiday food safety stressed.

Dates	Summary of Activities
12/05/2019	Food safety intervention training provided in Mandarin for 3 food handlers at NEW CHINA CUISINE at 5515 CAMINO AL NORTE, North Las Vegas, NV.
12/12/2019	Food safety intervention training provided in Spanish for 4 food handlers at ROBERTO'S TACO SHOP at 6820 W FLAMINGO.
12/23/2019	Food safety intervention training provided in Spanish for 1 food handler at COYOTE CHARRO at 325 SANDHILL Las Vegas, NV.
12/27/2019	Food safety intervention training provided in Spanish for 7 food handlers at TAQUERIA EL BUEN PASTOR PUSF at 525 E BONANZA Road Las Vegas, NV.
01/02/2020	Food safety intervention training provided in English for 4 food handlers at KYARA at 6555 S. Jones Blvd
01/27/2020	Food Safety Training (associated with Food Safety Partnership Meeting) using "Think Risk Workbook. English training – 41 attendees; Spanish training – 18 attendees.

Occurrence of Foodborne Illness Risk Factors in Southern Nevada

Southern Nevada Health District (SNHD)

Baseline Restaurant Risk Factor Study Report 2016

Occurrence of Foodborne Illness Risk Factors in Southern Nevada

Southern Nevada Health District (SNHD)

Baseline Restaurant Data Collection Report 2016

INTRODUCTION AND PURPOSE

The Southern Nevada Health District (SNHD) is the local health authority for Clark County, Nevada, which encompasses the Las Vegas metropolitan area, in addition to the rural areas of the county. The SNHD's mission is "to protect and promote the health, the environment and well being of Southern Nevada residents and visitors" in support of the vision "healthy people in a healthy Southern Nevada." The SNHD is governed by a Board of Health with representatives from all major cities and Clark County, as well as professional representatives (a physician, a non-gaming business and a major hotel business representative). The Board of Health is issued regulatory authority by the Nevada Revised Statutes 439.366 **Powers and jurisdiction of district board of health and district health department; regulations of district board of health**.

SNHD is one of the largest local health districts in the nation covering approximately 8,000 square miles. It serves a population of more than 2 million residents representing 73 percent of the state's population, in addition to an average of 3.7 million visitors each month (44 million each year).

The Food Establishment Inspection Program (Food Ops) of the Environmental Health (EH) Division is responsible for regulating 19,600 annual permits and more than 4,900 temporary food establishments annually with a Food Operations staff of 55 Environmental Health Specialists (EHSs), Senior EHSs, EH Supervisors, and an EH Manager. A wide variety of food facilities can be found in Clark County. This includes many complex large-scale food operations found at casino properties; a wide range of ethnic restaurants serving foods from every corner of the world; commercial processing facilities; warehouses; retail food stores; and a variety of fast-food, full-service and gourmet restaurants. Food establishment size and number of persons served per day ranges from extremely small operations typical in all jurisdictions to those that serve thousands of meals daily.

The current *Southern Nevada Health District Regulations Governing the Sanitation of Food Establishments* adopted on January 28, 2010 (2010 Food Regulations) incorporated mainly the 2005 FDA Food Code with parts of the 2009 FDA Food Code. The SNHD is currently drafting a new version of our food regulations based on the 2013 FDA Food Code.

The SNHD enrolled in the FDA's Voluntary Retail Food Program Standards in July 2012. As part of Standard 9, a Risk Factor Study must be conducted to identify the risky behaviors and practices in food establishments that are most in need of priority attention in order to develop strategies to reduce their occurrence. The current plan is to conduct the Risk Factor Study over three years completing one of the three retail food service categories in each year. The results of the initial data collection for each of the facility types will serve as the baseline measurement from which trends will be analyzed. Subsequent data collection periods for each of the facility types are planned at three- to five-year intervals after the initial data collection for purposes of analyzing impacts of intervention strategies.

METHODOLOGY

The SNHD Risk Factor Study utilized models and forms provided in the FDA guidance document entitled, *Study on the Occurrence of Foodborne Illness Risk Factors in Selected Retail and Foodservice Facility Types (2013-2024), Protocol for the Data Collection in Restaurant Facilities.* The SNHD closely mirrored the FDA methodology for selecting facility types and collecting data. After discussing the recent changes to Standard 9 with our FDA Retail Food Specialist, it was decided to conduct the study on the industry segment of "Restaurants" during the first year. The other industry segments will be conducted on separate years in the 5-year self-assessment cycle.

The 2010 Food Regulations, as noted earlier, are based mainly on the 2005 FDA Food Code; however, there are some critical differences. The requirement in Southern Nevada for short-term cold holding is 45° Fahrenheit (°F). The FDA requirement is 41°F. In addition, the SNHD allows a plus-or-minus 2-degree variance on the temperature. Another major discrepancy with the Food Code is that the 2010 Food Regulations do not require each establishment to have a certified food protection manager (CFPM). While it is expected that the upcoming revision of the SNHD Food Regulations will bring them in line with the 2013 FDA Food Code, they have not yet been adopted. SNHD chose to use the 2009 FDA Food Code as the standard for the Risk Factor Study to allow for better comparison to national data.

Informational briefings describing the Risk Factor Study, its importance, and the general plan to accomplish it were delivered to the Food Ops Leadership group on December 2, 2015 and to the EH Food Ops staff during the Food Ops Staff Meeting on December 17, 2015.

The SNHD chose to mirror the FDA's Risk Factor Study by identifying qualifying restaurant permits and categorizing them as either fast food or full-service restaurants. By definition, meals at fast food facilities were ordered and paid for at a counter prior to receiving the meal while full service meals were ordered at the table and paid for after the meal was received. This required reviewing a list of over 5,000 permits to determine qualification and categorization resulting in 2,362 fast food permits and 2,159 full-service permits.

Eligible restaurant lists were submitted to the FDA for analysis to determine the number of data collections needed for various confidence levels. The resulting sampling sizes were considerably higher than expected:

Confidence Level	# of Fast Food Permits	# of Full Service Permits	Total # of Permits
95%±5%	331	327	658
90%±5%	243	241	484
95%±10%	93	92	185
90%±10%	66	66	132

The initial intent was to reach a confidence level of 95 percent, plus or minus 5 percent, using five data collectors to conduct Risk Assessment Surveys on the assumed approximate 500 facilities with the study to be completed every 5 years. On February 10, 2016, a meeting was scheduled with SNHD's informatics department to determine the best approach to the Risk Factor Study. By the end of the meeting, there was a revised plan. The revised plan had two phases: In phase one, random lists were developed to cover the 658 restaurants required to achieve a confidence level of 95 percent, plus or minus 5 percent, but initially only two of the five data collectors were used to collect data on the first 132 facilities to achieve a confidence level of 90 percent, plus or minus 10 percent. Once phase one is complete, a determination will be made as to the feasibility of completing the remaining 526 restaurants. Should it be determined that it is feasible to continue, the other three data collectors will be activated to assist.

On January 20, 2016, the FDA protocol was issued to the data collectors for their review. On January 27, 2016, ten data collectors (EH Specialist II's and Senior EH Specialists) attended a 5-hour training session with John Marcello, FDA Retail Food Specialist, on interpretation of the data items, marking instructions and how to conduct data collection. On February 22, 2016, the data collectors attended an FDA webinar to learn to use FoodSHIELD, a web-based database.

A. Selection of Facilities

For the 2016 SNHD Risk Factor Study, data was collected on the Restaurant segment divided into full service and fast food facility types. Facilities were selected utilizing Research Randomizer (www.randomizer.org) to generate random number lists which were applied to lists of facilities of each facility type. Four random number lists were created: full service primary, full service alternate, fast food primary, fast food alternate. FDA methodology was used for selecting alternate facilities for those on the primary list to substitute when needed. Any facility that declined to participate or was otherwise disqualified was removed from the study and replaced with the next available facility on the alternate list.

B. Data Collection

The randomly selected facilities were split among three data collectors (initially two data collectors, and a third was added). To assess risk factors, the three inspectors conducted unannounced surveys during which the field inspector interviewed the Person in Charge and conducted the equivalent of a routine unannounced inspection and gathered additional information in order to complete the FDA RETAIL FOOD PROGRAM FOODBORNE ILLNESS RISK FACTOR STUDY RESTAURANT DATA COLLECTION FORM. The data gathered was input into the FoodSHIELD database. The Person in Charge was informed of the reason for the data collection, that observations would not be shared with the routine inspector, and that the survey was non-regulatory in that it did not affect the facility's grade or inspection cycle; however, should an imminent health hazard be observed, the facility would be closed to protect public health and the facility would be disqualified from the study. An SNHD Report and Notice of Inspection Form was left at each facility documenting the visit, but it did not list observations made during the inspection (See Document Example in Appendix A).

Data was collected on 66 full service and 68 fast food facilities (134 facilities total) between February 22 and July 19, 2016. EH Management determined to conclude the study at this point, achieving a confidence level of 90 percent, plus or minus 10 percent.

C. Quality Control

To ensure uniformity, only three field inspectors were assigned as data collectors. The EH Supervisor of Training and Compliance (also an FDA Standard) accompanied each data collector on their first survey and again at random intervals to ensure quality control. The staff met regularly to discuss questions and concerns to maintain consistency. The FDA Regional Retail Food Specialist was consulted when clarification on how to mark a data item was needed. Upon completion, each data collection form was entered into the FoodSHIELD database.

RESULTS

As the SNHD 2016 data collection for the Risk Factor Study establishes our baseline for foodborne illness risk factors, we do not have previous data to compare against. The baseline data is detailed in reports generated from FoodSHIELD in Appendix B.

For each of the data items (DI), the inspector marked the item as:

- **IN**=Item observed to be "in compliance" with Food Code provisions.
- **OUT**=Item observed to be "out of compliance" with Food Code provisions. An explanation was provided in the comment section on the data collection form for each observations marked "OUT."
- **NO**=Item was "not observed." The "NO" notation was used when an item was a usual practice in the food service operation, but the practice was not observed during the time of the inspection. *For example if a restaurant cooks food and then cools it for later use, but was not doing so at the time of the survey, then data items pertaining to cooling practices and cooling temperatures were marked "not observable."*
- **NA**=Item was "not applicable." The "NA" notation was used when an item was not part of the food service operation*. For example, if a seafood department that conducts no cooking was selected for the study, then all data items pertaining to cooking were marked "not applicable."*

A. Data Items by Risk Factor

The data collection is intended to be targeted to the assessment of the control of foodborne illness risk factors. It is not intended to be a comprehensive assessment of compliance with *Food Code/SNHD Food Regulation* requirements.

Data items 1 through 10 are considered primary data items. Each of the primary data items has been placed under the appropriate FDA foodborne illness risk factor category. Data items 11 through 19 are listed under the heading "Other Areas of Interest." These food safety practices and procedures directly support active managerial control of the foodborne illness risk factor areas addressed under the primary data items. The table below places each data item into a risk factor category.

Data Items Sorted by Risk Factor

Risk Factor Category	Data Items
Poor Personal Hygiene	1A, 1B, 2, 11A, 11B, 12A, 12B, 12C
Contaminated Equipment / Protection from Contamination	3A, 3B, 3C, 3D, 3E, 4A, 4B, 4C, 4D
Improper Holding Time / Temperature	5A, 5, 5C, 6A, 6B, 6C, 7A, 7B, 7C, 7D, 8A, 8B, 8C, 8D, 14A, 14B, 14C
Inadequate Cooking	9A, 9B, 9C, 9D, 9E, 9F, 10A, 10B, 10C
Foods from Unsafe Sources	16A, 16B, 16C, 16D, 17A, 17B, 17C, 17D, 17E, 17F, 17G, 17H
OTHER Chemicals	18A, 18B
OTHER Allergy Awareness	19A, 19B

B. Top 5 Data Items "IN" Compliance

Primary data items (data items 1 through 10) were used to determine the top 5 Risk Factor data items marked "IN" compliance; percent "IN" was calculated using the total number of data collection findings (IN, OUT, NO, and NA). All items in the top 5 scored above 80 percent compliant, indicating control over these items in Southern Nevada. Actual contamination of food (3C) was only observed twice out of 134 observations. The most impressive of the Top 10, no bare hand contact with ready-to-eat food (2) was

found to be "IN" compliance 90.3 percent of the time (observed "OUT" 13 of 134 observations). This requirement was introduced to Southern Nevada in the 2010 Food Regulations and the results display industry compliance with a relatively new regulatory requirement. Date marking of opened commercial containers of prepared Ready-to-Eat Time/Temperature Control for Safety (RTE TCS) foods (8B) and discarding of all RTE TCS foods (8C) also have high compliance rates, 86 percent and 81 percent respectively. Date marking of RTE TCS food prepared on-site (8A), although not in the top 5, had a compliance rate of 78 percent.

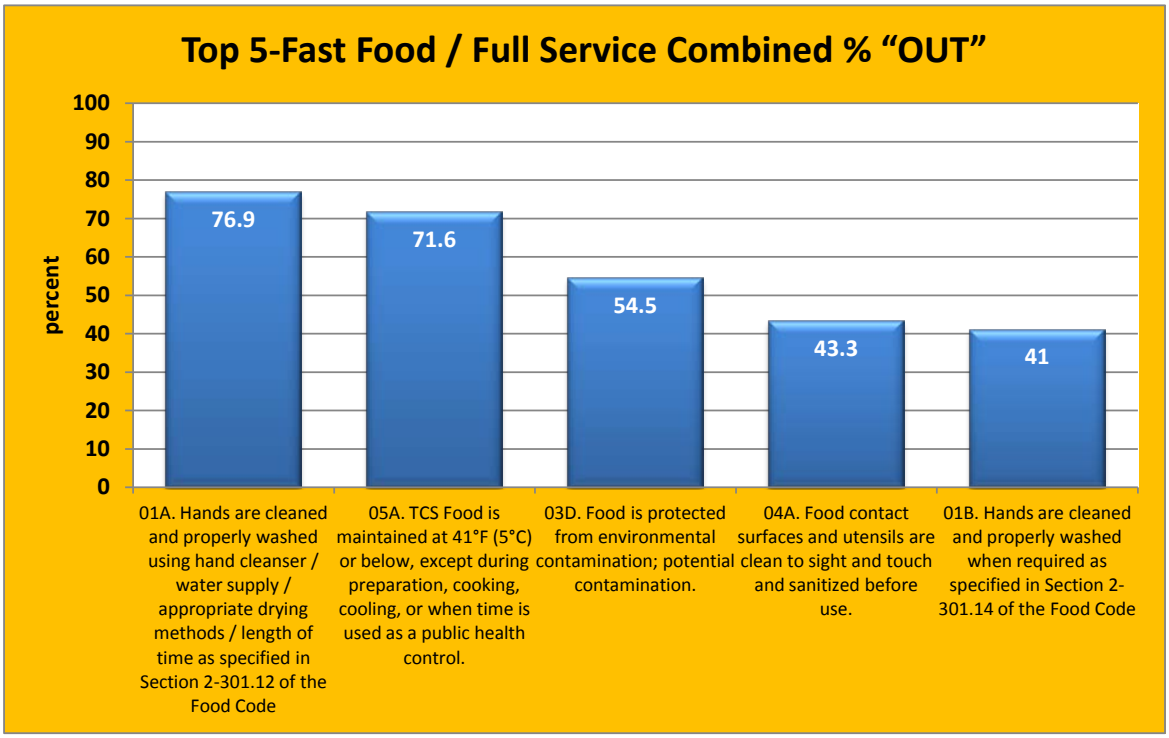
Separating different raw animal foods properly from each other (3B) was observed "IN" 83.3 percent of the time, compared to raw animal foods separated from RTE foods (3A; not in the top 5) which was observed "IN" 77 percent of the time.

Data Item IN Compliance	Fast Food / Full Service Combined % "IN"	Risk Factor
03C. Food is protected from environmental contamination; actual contamination observed.	98.5	Contaminated Equip/ Protection from Contamination
02. Food employees do not contact ready-to-eat foods with bare hands.	90.3	Personal Hygiene
08B. Open commercial containers of prepared ready-to-eat TCS Food held for more than 24 hours are date marked as required.	85.8	Improper Holding Time/Temp
03B. Different raw animal foods are separated from each other.	83.3	Contaminated Equip/ Protection from Contamination
08C. Ready-to-eat, TCS Food prepared on-site and/or opened commercial container exceeding 7 days at 41°F is discarded.	81.3	Improper Holding Time/Temp

C. Top 5 Data Items "OUT" of Compliance

Percent "OUT" was calculated using the total number of data collection findings (IN, OUT, NO, and NA) and only primary data items (data items 1 through 10) were used to determine the top 5 Risk Factor data items marked "OUT" of compliance. Proper handwashing procedure (1A) had the highest percentage "OUT" at 76.9 percent. During the data collection, to follow the FDA model and strict enforcement of the Regulations, any handwash observed without a full fifteen second scrub outside the running water was marked as "OUT". This is contradictory to the SNHD's practice of education over violation for handwashing that is "close" to fifteen seconds and for scrubbing hands under running water. Washing hands when required (1B) had a better compliance rate (41 percent "OUT"), however attention is still needed. Cold holding of TCS foods (5A) was identified as "OUT" of compliance 71.6 percent of the time, identifying it as needing priority attention. As mentioned above, 2010 SNHD Regulations allow for storage of TCS foods at 45°F for up to 72 hours. During the data collection, to follow the FDA model, all TCS foods observed above 41°F were marked out. This accounts for a higher occurrence of "OUT" markings than what is addressed on current routine inspections. Protection from potential contamination (3D) and food contact surfaces cleaned and sanitized (4A) also fall into the top 5 data items "OUT" at 54.5 percent and 43.3 percent respectively.

Data Item OUT of compliance	Fast Food / Full Service Combined % "OUT"	Risk Factor
01A. 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 Food Code	76.9	Personal Hygiene
05A. 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.	71.6	Improper Holding Time/Temp
03D. Food is protected from environmental contamination; potential contamination.	54.5	Contaminated Equip/ Protection from Contamination
04A. Food contact surfaces and utensils are clean to sight and touch and sanitized before use.	43.3	Contaminated Equip/ Protection from Contamination
01B. Hands are cleaned and properly washed when required as specified in Section 2-301.14 of the Food Code	41	Personal Hygiene



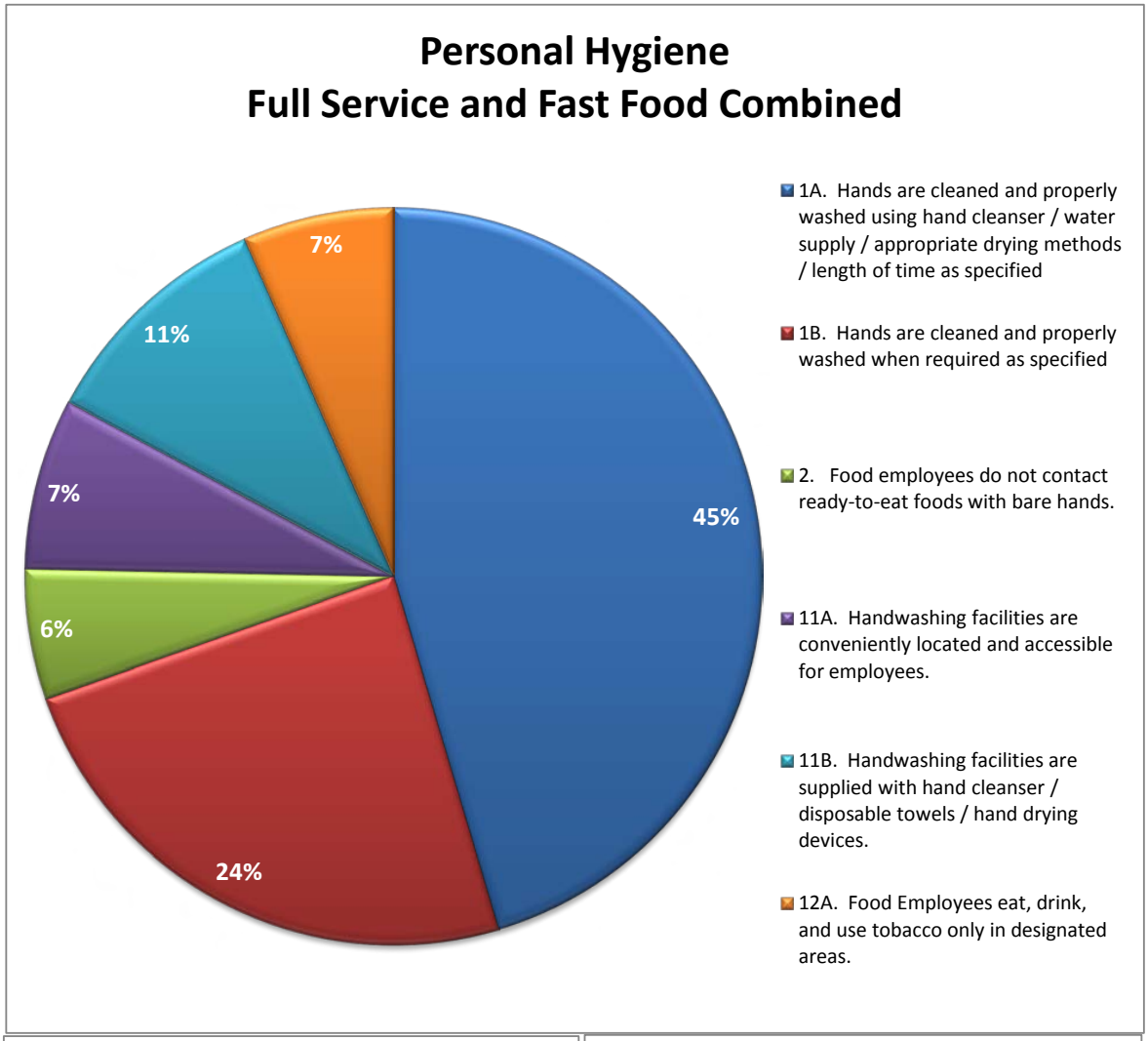
D. Personal Hygiene

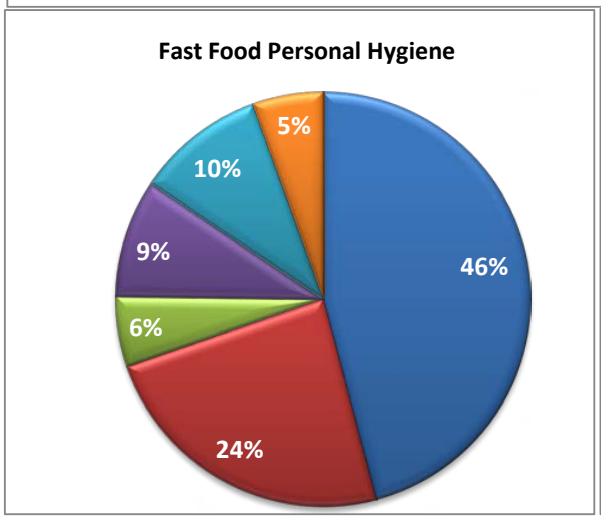
With personal hygiene having such an impact on foodborne illness, it warranted further analysis. The sum of the percentage data items 1A, 1B, 2, 11A, 11B, 12A, 12B, 12C marked out on the risk factor data collection was used to calculate the percentage each item contributed to the personal hygiene risk factor. (Note: Data items 12B and 12C were not marked "OUT" during the data collection.)

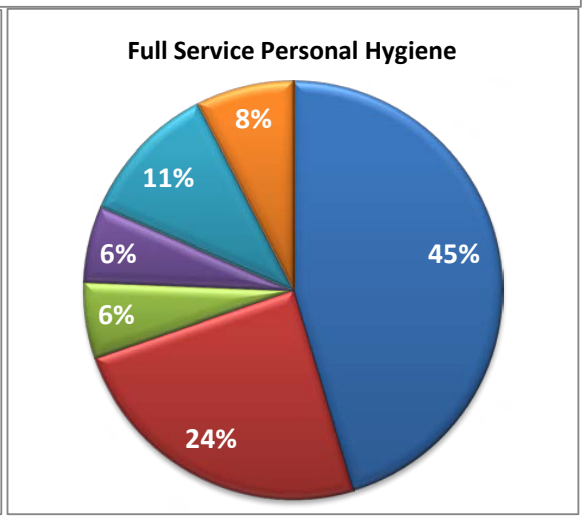
Full Service	% marked OUT	Personal Hygiene Composition
1A. Hands are cleaned and properly washed using hand cleanser / water supply / appropriate drying methods / length of time as specified	81.8	45%
1B. Hands are cleaned and properly washed when required as specified	43.9	24%
2. Food employees do not contact ready-to-eat foods with bare hands.	10.6	6%
11A. Handwashing facilities are conveniently located and accessible for employees.	10.6	6%
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.	19.7	11%
12A. Food Employees eat, drink, and use tobacco only in designated areas.	13.6	8%
TOTALS	180.2	100%

Fast Food	% marked OUT	Personal Hygiene Composition
1A. Hands are cleaned and properly washed using hand cleanser / water supply / appropriate drying methods / length of time as specified	73.5	46%
1B. Hands are cleaned and properly washed when required as specified	38.2	24%
2. Food employees do not contact ready-to-eat foods with bare hands.	8.8	6%
11A. Handwashing facilities are conveniently located and accessible for employees.	14.7	9%
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.	16.2	10%
12A. Food Employees eat, drink, and use tobacco only in designated areas.	8.8	5%
TOTALS	160.2	100%

Full Service & Fast Food Combined	% marked OUT	Personal Hygiene Composition
1A. Hands are cleaned and properly washed using hand cleanser / water supply / appropriate drying methods / length of time as specified	76.9	45%
1B. Hands are cleaned and properly washed when required as specified	41	24%
2. Food employees do not contact ready-to-eat foods with bare hands.	9.7	6%
11A. Handwashing facilities are conveniently located and accessible for employees.	12.7	7%
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.	17.9	11%
12A. Food Employees eat, drink, and use tobacco only in designated areas.	11.2	7%
TOTALS	169.4	100%


Personal Hygiene
Full Service and Fast Food Combined
45%
24%
6%
7%
11%
7%
1A. Hands are cleaned and properly washed using hand cleanser / water supply / appropriate drying methods / length of time as specified
1B. Hands are cleaned and properly washed when required as specified
2. Food employees do not contact ready-to-eat foods with bare hands.
11A. Handwashing facilities are conveniently located and accessible for employees.
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.
12A. Food Employees eat, drink, and use tobacco only in designated areas.


Fast Food Personal Hygiene
46%
24%
6%
9%
10%
5%


Full Service Personal Hygiene
45%
24%
6%
6%
11%
8%

E. Allergen Awareness

While Major Food Allergen awareness is not currently considered one of the five critical risk factors for foodborne illness, it is an ever-growing area of public concern. Even the slightest cross-contamination for someone with a significant food allergy can lead to life-threatening reactions, up to and including anaphylactic shock and death. Accordingly, the statistics gathered (combined "OUT" at 70.9 percent) reflect that the Person in Charge needs to become more aware of the "Big 8" food ingredients that lead to allergic reactions (Milk, Eggs, Wheat, Soy, Peanuts, Tree Nuts, Crustacean Shellfish, and Fish) and what an allergic reaction to food looks like in a person so that appropriate measures can be taken to protect at-risk customers.

Conversely, there is a statistically significant amount of training for food employees that takes place (Combined "IN" at 64.2 percent). The desired results of this training would be retention of this information by employees so they can inform customers when their allergen of concern is present in the food, either as an ingredient, or by cross contamination. The key is to prevent an allergic reaction by a vulnerable person.

Fast Food					
Number of Information Statements	**IN**	**IN %**	**OUT**	**OUT %**	**TOTAL OBSERVATIONS (IN and OUT)**
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens.	18	26.5	50	73.5	68
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	42	61.8	26	38.2	68

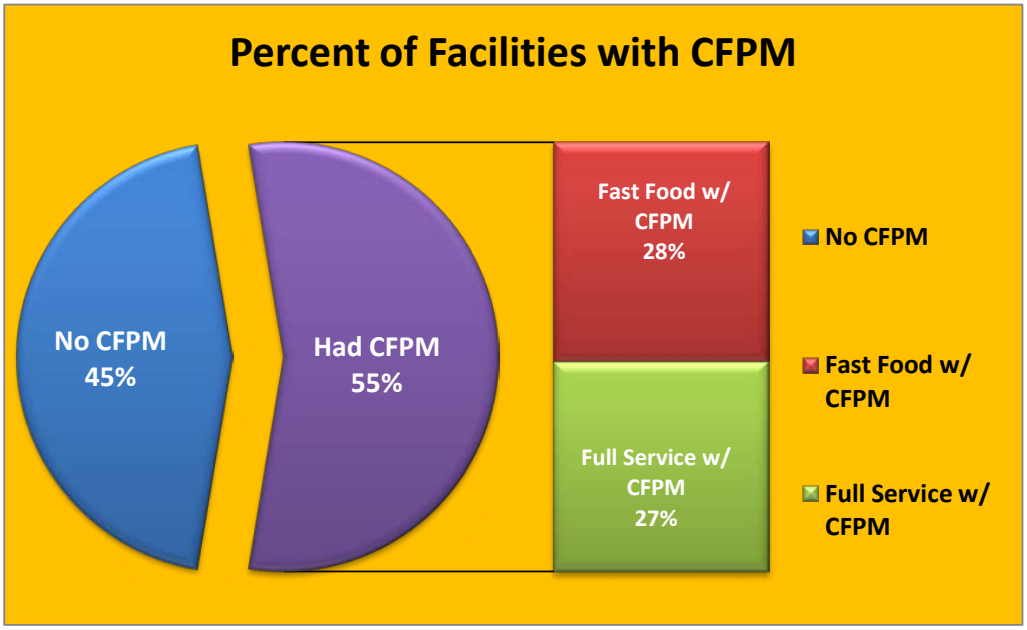
Full Service					
Number of Information Statements	**IN**	**IN %**	**OUT**	**OUT %**	**TOTAL OBSERVATIONS (IN and OUT)**
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens.	21	31.8	45	68.2	**66**
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	44	66.7	22	33.3	**66**

Combined					
Number of Information Statements	**IN**	**IN %**	**OUT**	**OUT %**	**TOTAL OBSERVATIONS (IN and OUT)**
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens.	39	29.1	95	70.9	**134**
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	86	64.2	48	35.8	**134**

F. Certified Food Protection Manager (CFPM)

Although the SNHD does not require a CFPM to be employed by each facility, data was gathered on whether each facility employed a CFPM or not. Only American National Standards Institute (ANSI) accredited courses were counted toward a CFPM, and the number of facilities with a CFPM include if the CFPM certificate was available and not available at the time of the survey.

Facility Type	# facilities with a CFPM	% per FACILITY TYPE ONLY with CFPM	% TOTAL with a CFPM
Full Service (n=66)	38	57.58	28.36
Fast Food (n=68)	36	52.94	26.86
Total Facilities (n=134)	**74**	**55.22**	**55.22**



G. Number Marked "OUT" Reports

The number of data items marked "OUT" for each data collection survey were also analyzed. For the purpose of this analysis, a data item was considered to be "OUT" if any of the observations in that data item were marked out. For example, if 3C was marked "OUT" but 3A, 3B, 3D and 3E were marked "IN," "NO," or "NA" data item #3 (food is protected from cross contamination) was marked "OUT." The tables below present the total number and percent of establishments by facility type that were observed to be "OUT" of compliance with between 0 and 10 primary data items (1-10); items 11-19 were not considered for this information. For example, the number "0" in the left hand column of the table below denotes that no OUT of Compliance observations were observed during the data collection. The number "1" denotes that a total of one out of ten was observed and so forth. The number of establishments in the second column of the table below represents the total number of facilities that had the corresponding number of primary data items OUT of compliance. The third column presents the percentage of establishment for that category. The cumulative percentage is a running summary of the percentage of establishments included in the analysis.

The mean (average) number of items marked "OUT" for fast food was 2.2, full service 2.7, and fast food and full service combined 2.5.

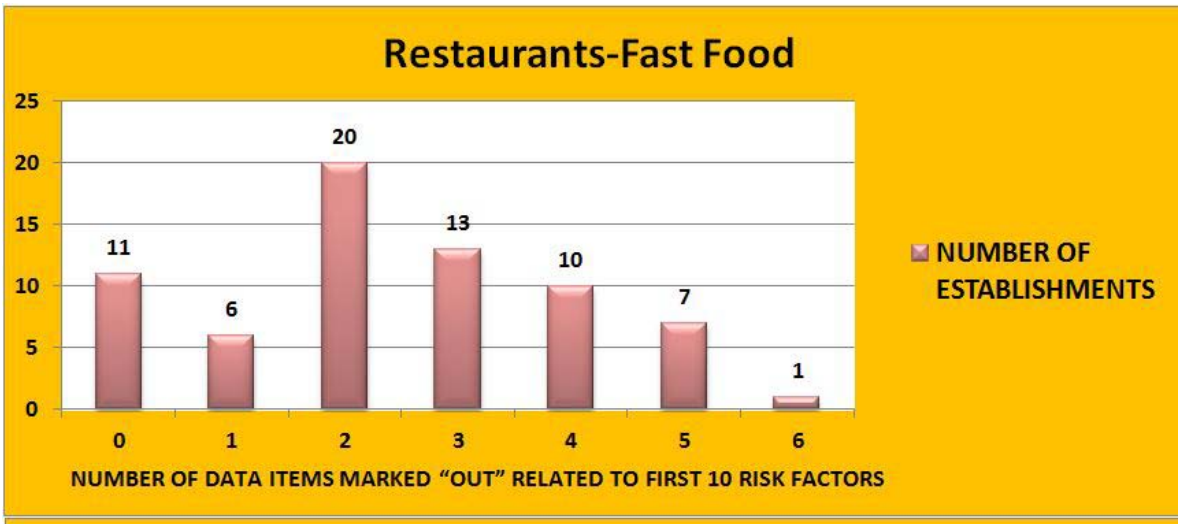
RISK FACTOR DATA ITEMS:

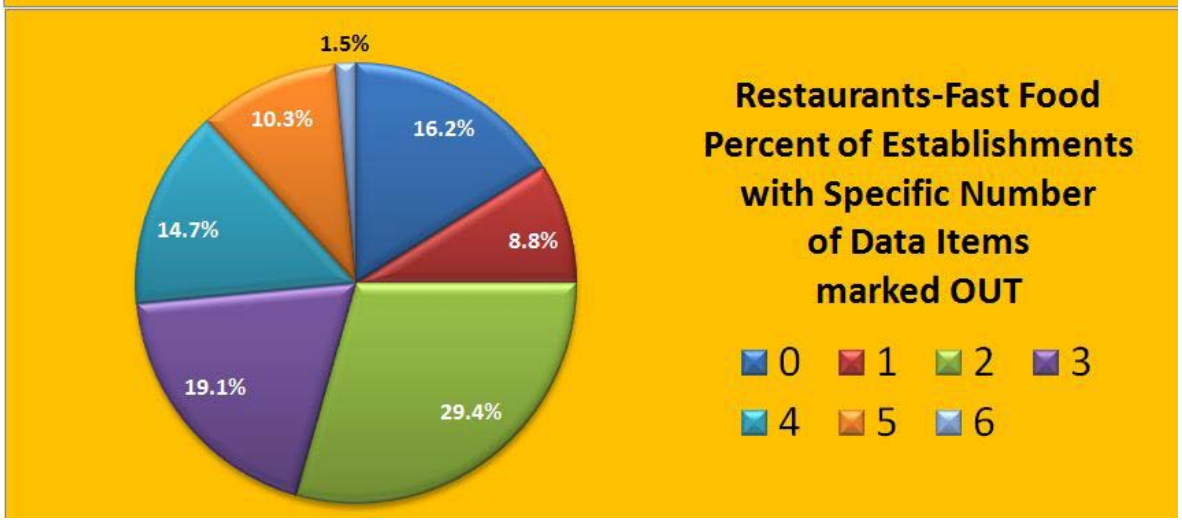
1. Employees proper handwashing
2. Food Employees do not contact ready-to-eat foods with bare hands.
3. Food is protected from cross-contamination during storage, preparation, and display
4. Food contact surfaces are properly cleaned and sanitized.
5. Foods requiring refrigeration are held at the proper temperature.
6. Foods displayed or stored hot are held at the proper temperature.
7. Foods are cooled properly
8. Refrigerated, ready-to-eat foods are properly date marked and discarded within 7 days of preparation or opening
9. Raw animal foods are cooked to required temperatures.
10. Cooked foods are reheated to required temperatures.

1. RESTAURANT-FAST FOOD

NUMBER OF DATA ITEMS MARKED "OUT" RELATED TO FIRST 10 RISK FACTORS	NUMBER OF ESTABLISHMENTS	% OF ESTABLISHMENTS	CUMULATIVE % OF ESTABLISHMENTS
0	11	16.2	16.2
1	6	8.8	25
2	20	29.4	54.4
3	13	19.1	73.5
4	10	14.7	88.2
5	7	10.3	98.5
6	1	1.5	100
7*	0	0	100
8*	0	0	100
9*	0	0	100
10*	0	0	100

0 means no items were marked as OUT, 1 means one item was marked OUT, 2 means two items were marked OUT, ETC.
***GRAY MEANS THAT NONE OF THE ESTABLISHMENTS RECEIVED 7 TO 10 "OUT" MARKINGS**

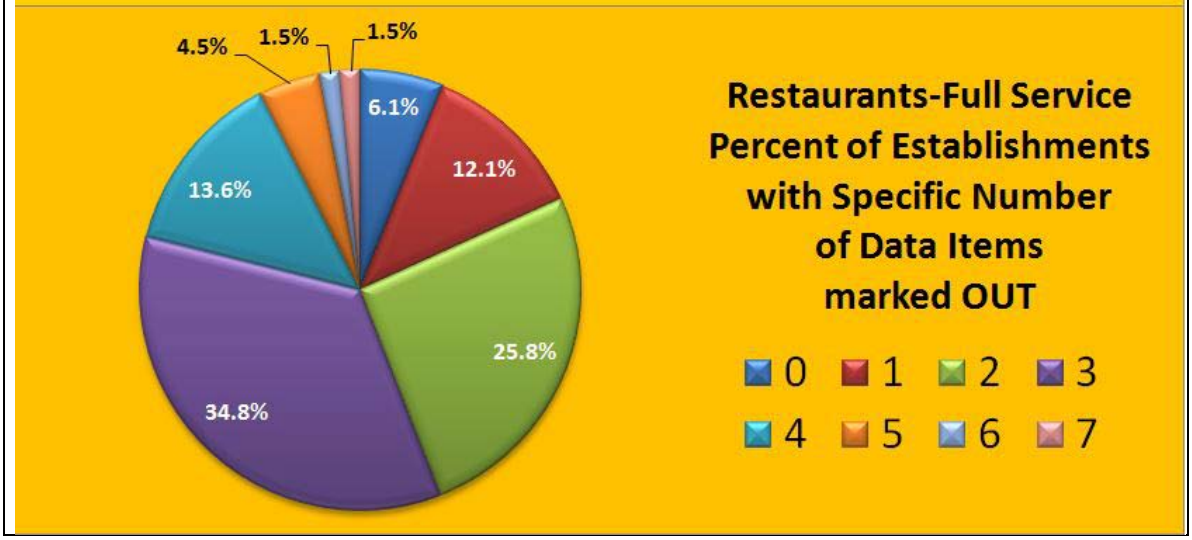




2. RESTAURANT-FULL SERVICE

NUMBER OF DATA ITEMS MARKED "OUT" RELATED TO FIRST 10 RISK FACTORS	NUMBER OF ESTABLISHMENTS	% OF ESTABLISHMENTS	CUMULATIVE % OF ESTABLISHMENTS
0	4	6.1	6.1
1	8	12.1	18.2
2	17	25.8	44
3	23	34.8	78.8
4	9	13.6	92.4
5	3	4.5	96.9
6	1	1.5	98.4
7	1	1.5	99.9
8*	0	0	99.9
9*	0	0	99.9
10*	0	0	99.9

0 means no items were marked as OUT, 1 means one item was marked OUT, 2 means two items were marked OUT, ETC.
***GRAY MEANS THAT NONE OF THE ESTABLISHMENTS RECEIVED 8 TO 10 "OUT" MARKINGS**

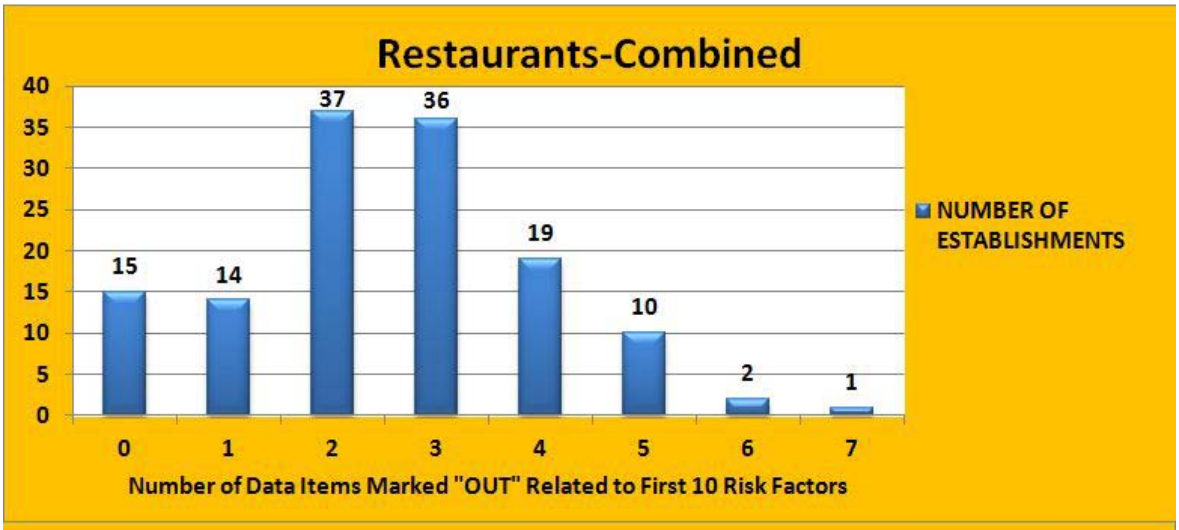


3. RESTAURANTS-COMBINED

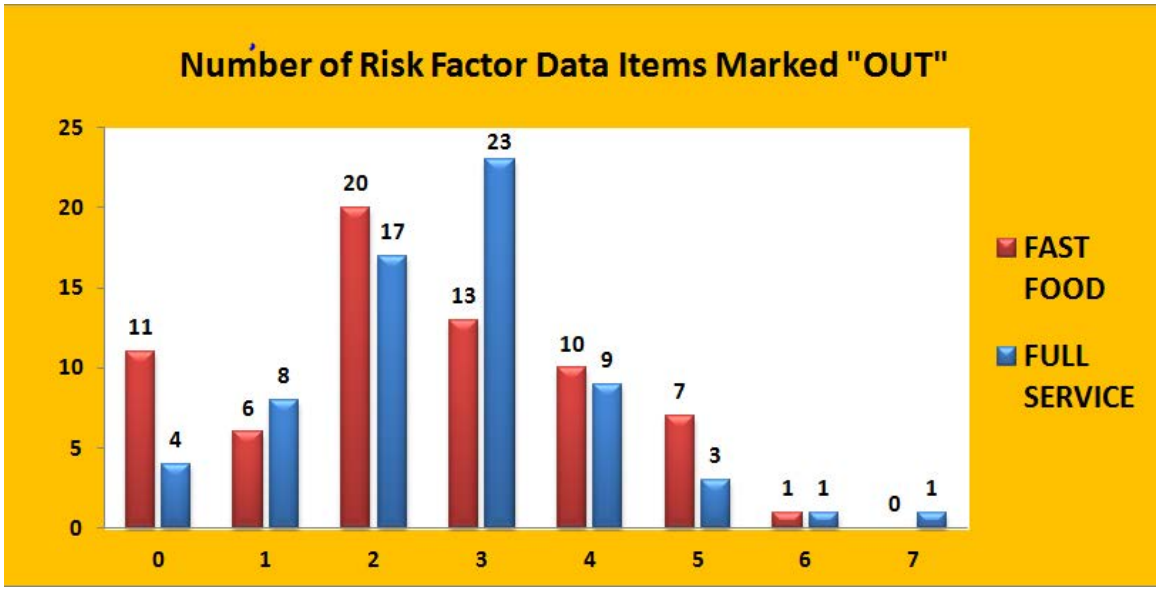
NUMBER OF DATA ITEMS MARKED "OUT" RELATED TO FIRST 10 RISK FACTORS	NUMBER OF ESTABLISHMENTS	% OF ESTABLISHMENTS	CUMULATIVE % OF ESTABLISHMENTS
0	15	11.2	11.2
1	14	10.4	21.6
2	37	27.6	49.2
3	36	26.9	76.1
4	19	14.2	90.3
5	10	7.5	97.8
6	2	1.5	99.3
7	1	0.7	100
8*	0	0	100
9*	0	0	100
10*	0	0	100

0 means no items were marked as OUT, 1 means one item was marked OUT, 2 means two items were marked OUT, ETC.

***GRAY MEANS THAT NONE OF THE ESTABLISHMENTS RECEIVED 8 TO 10 "OUT" MARKINGS**



4. Number of Data Items Marked "OUT" Comparisons



INTERVENTION STRATEGIES

A. Handwashing

As per the Centers for Disease Control and Prevention, the spread of germs from the hands of food workers to food is an important cause of foodborne illness outbreaks in restaurants. In fact, it has caused 89 percent of outbreaks in which food was contaminated by food workers. Proper handwashing can reduce microorganisms on workers' hands. It can also reduce the spread of pathogenic microorganisms from hands to food and from food to other people. Improving food worker handwashing practices is critical.

The SNHD plans to work with the regulated food facilities through industry meetings and will involve Food Operations inspectors in developing intervention strategies to improve food handlers' handwashing practices. The plan will be implemented in calendar year 2017. The current idea is to incorporate education utilizing a hands-on exercise focusing on handwashing technique during the first inspection at each facility for the 2017 calendar year. Development will include a name/title for the intervention strategy, discussion topics, exercise specifics, and EH staff training. The goal of involving industry and regulatory staff in the development of the strategy is to increase awareness, ownership, and enthusiasm.

B. Cold Holding

The SNHD EH Division is currently working on new Food Regulations that will align closely with the 2013 FDA Food Code, including removing the current allowance for cold holding of TCS foods at 45°F for up to 72 hours. Once the new Food Regulations are adopted by the SNHD Board of Health, the EH Division will provide training on the updates to regulatory staff as well as the regulated industry. As this will be one of the major updates to the Food Regulations, it will be emphasized during trainings.

C. Allergen Awareness

This Risk Factor Study has brought to light the need for increased allergen awareness. The person in charge at the facility is required by regulation to have sufficient knowledge to describe which foods are identified as major food allergens and to recognize the signs and symptoms experienced by a person who is suffering a reaction to one of the major food allergens. This current hot topic in food safety is evolving in the restaurant industry as regulators struggle to protect the public, enforce regulation, and create practical requirements that can be put into place in the operation of a food establishment. Although allergen awareness is not a foodborne illness risk factor, and not included in the primary data items of this Risk Factor Study, it is still an important issue in protecting the health of the public. The SNHD plans to have an educational campaign promoting allergen awareness, which will be implemented in calendar year 2018.

ACKNOWLEDGEMENTS

The data for this report was collected and entered into the database by David Greer, Meredith Garman, and Mikki Knowles. The many hours these staff dedicated to the data collection would not have been possible without the support of their supervisors and the other members of their offices who assisted with maintaining their workload.

The Risk Factor Study project was led by David Greer and overseen by Christine Sylvis. This report was compiled and written by Christine Sylvis, David Greer, and Nancy Hall.

A cooperative agreement grant awarded by the FDA for the advancement of the Voluntary National Retail Food Regulatory Program Standards was used to help fund the personnel costs for the planning and data collection for this study.

SNHD Chief Health Officer, Dr. Joseph Iser is recognized for his support of the EH Division, especially the advancement of the Voluntary National Retail Food Regulatory Program Standards. Jacqueline Reszetar and Rose Henderson, EH Management, are recognized for their encouragement on this project and their guidance through the planning stage. Additional valuable partners who contributed to this study include John Marcello, FDA Regional Food Specialist, and SNHD staff Jacob Billings, Debbie Clark, Aminta Martinez-Hermosilla, Gary Robinson, Candice Sims, George Taylor, and Brenda Welch.

APPENDICES

A. REPORT AND NOTICE OF INSPECTION COPY LEFT WITH FACILITIES

SOUTHERN NEVADA HEALTH DISTRICT

Report and Notice of Inspection

Page 1 of 1

280 SOUTH DECATUR BLVD • LAS VEGAS, NV • 89107 • 702-759-1110 (DIRECT) • 702-759-1000 (24 HOURS)

FACILITY INFORMATION

PERMIT #	ESTABLISHMENT NAME	PHONE #	COMPL. SCHED. DUE	PRIMARY EHS

ADDRESS	RISK CAT.	P.E. Code	DISTRICT	LOCATION	RECORD ID

CONTACT PERSON:

CURRENT ACTION	EHS	SERVICE	DATE	TIME IN	TIME OUT	TRAVEL MIN	PERMIT STATUS

RESULT		FUTURE ACTION	ACTION	DATE

SPECIAL NOTES

- NOTIFIED OF THE FOLLOWING -

Your facility has been randomly selected as part of Southern Nevada Health District's (SNHD) project designed to assess food preparation procedures and practices specific to the various segments of the retail food industry. SNHD will use this research for identifying best practices within the industry and directing limited resources to areas that will provide the most significant public health benefits. This is not a regulatory visit. Your participation is voluntary. No inspection report will be left with your facility. An exit briefing will be provided at the end of the visit to discuss significant findings that may assist you in enhancing the effectiveness of your food safety system. Should an observation be made of a food safety procedure or practice that poses a significant public health risk, every effort will be made to work with you to ensure that the appropriate corrective action is taken to alleviate the hazard. Your facility's name will not appear on any reports or public documents. The research project is designed to protect the privacy of participating establishments to the extent the law permits. The data collected is tabulated using broad industry segments and is not associated with any specific establishment. Thank you for your willingness to cooperate in this important endeavor. It is through this type of cooperative effort that government and the food service industry seek to provide safe and wholesome food to the consuming public.

Inspector name and phone number:

Reviewed by	Received by (signature)	Received by (printed)	EHS (signature)

B. FACILITY TYPE REPORTS-FULL DATA TABLES

1. RESTAURANTS-Fast Food

RESTAURANT-FAST FOOD								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
1. Employees practice proper handwashing								
1A. 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 Food Code	18	26.5	50	73.5	0	0	0	0
1B. Hands are cleaned and properly washed when required as specified in Section 2-301.14 of the *Food Code*	42	61.8	26	38.2	0	0	0	0
2. Bare hand contact restriction								
2. Food employees do not contact ready-to-eat foods with bare hands.	62	91.2	6	8.8	0	0	0	0
3. Food is protected from cross-contamination during storage, preparation, and display								
3A. Raw animal foods are separated from ready-to-eat foods.	52	75.4	4	5.8	1	1.4	12	17.4
3B. Different raw animal foods are separated from each other.	50	69.4	4	5.6	4	5.6	14	19.4
3C. Food is protected from environmental contamination-actual contamination observed.	68	100	0	0	0	0	0	0
3D. Food is protected from environmental contamination-potential contamination.	33	48.5	35	51.5	0	0	0	0
4. Food contact surfaces are properly cleaned and sanitized								
4A. Food contact surfaces and utensils are clean to sight and touch and sanitized before use.	41	60.3	27	39.7	0	0	0	0
4B. Equipment food contact surfaces and utensils are cleaned and sanitized properly using manual warewashing procedures.	30	44.1	12	17.6	26	38.2	0	0
4C. Equipment food contact surfaces and utensils are cleaned and sanitized properly using mechanical warewashing equipment.	18	24.3	3	4.1	18	24.3	35	47.3
4D. Other (describe in the comments section)	0	0	1	1.5	0	0	67	98.5
5. Foods requiring refrigeration are held at the proper temperature								
5A. 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.	26	38.2	42	61.8	0	0	0	0
5B. Raw shell eggs are stored under refrigeration that maintains ambient air temperature of 45°F (7°C) or less.	24	32.4	2	2.7	18	24.3	30	40.5
6. Foods displayed or stored hot are held at the proper temperature								
6A. TCS Food is maintained at 135°F (57°C) or above, except during preparation, cooking, cooling, or when time is used as a public health control.	39	55.7	14	20	9	12.9	8	11.4
6B. Roasts are held at a temperature of 130°F (54°C) or above.	0	0	1	1.3	16	21.1	59	77.6
7. Foods are cooled properly								
7A. Cooked TCS Food is cooled from 135°F (57°C) to 70°F (21°C) within 2 hours **and** from 135°F (57°C) to 41°F (5°C) or below within 6 hours.	6	7.9	5	6.6	34	44.7	31	40.8
7B. TCS Food (prepared from ingredients at ambient temperature) is cooled to 41°F (5°C) or below within 4 hours.	4	5.5	4	5.5	41	56.2	24	32.9
7C. Proper cooling methods / equipment are used.	12	17.4	8	11.6	28	40.6	21	30.4
7D. Other (describe in the temperature chart and comments section)	1	1.5	0	0	0	0	67	98.5

RESTAURANT-FAST FOOD								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
8. Refrigerated, ready-to-eat foods are properly date marked and discarded within 7 days of preparation or opening								
8A. Ready-to-eat, TCS Food (prepared on-site) held for more than 24 hours is date marked as required.	51	73.9	12	17.4	2	2.9	4	5.8
8B. Open commercial containers of prepared ready-to-eat TCS Food held for more than 24 hours are date marked as required.	53	77.9	6	8.8	7	10.3	2	2.9
8C. Ready-to-eat, TCS Food prepared on-site and/or opened commercial container exceeding 7 days at ≤ 41°F is discarded.	55	80.9	0	0	13	19.1	0	0
9. Raw animal foods are cooked to required temperature								
9A. Raw shell eggs broken for immediate service are cooked to 145°F (63°C) for 15 seconds. Raw shell eggs broken but not prepared for immediate service cooked to 155°F (68°C) for 15 seconds.	5	6.5	0	0	36	46.8	36	46.8
9B. Pork; Fish; Beef; Commercially-raised Game Animals are cooked to 145°F (63°C) for 15 seconds.	7	9.3	0	0	39	52	29	38.7
9C. Comminuted Fish, Meats, Commercially-raised Game Animals are cooked to 155°F (68°C) for 15 seconds.	17	23.3	0	0	33	45.2	23	31.5
9D. Poultry; stuffed fish; stuffed meat; stuffed pasta; stuffed poultry; stuffed ratite; or stuffing containing fish, meat, poultry, or ratites; wild game animals are cooked to 165°F (74°C) for 15 seconds.	21	28.8	0	0	34	46.6	18	24.7
9E. Roasts, including formed roasts, are cooked to 130°F (54°C) for 112 minutes or as Chart specifies and according to oven parameters per Chart ***(NOTE: This data item includes beef roasts, corned beef roasts, pork roasts, and cured pork roasts such as ham)***	0	0	0	0	23	29.1	56	70.9
9F. Other Cooking Observations (describe in the Comment Section and Temperature Chart).	0	0	0	0	9	12	66	88
10. Cooked foods are reheated to required temperature OBSERVATION								
10A. TCS Food that is cooked and cooled on premises is rapidly reheated to 165°F (74°C) for 15 seconds for hot holding.	3	4.1	0	0	42	56.8	29	39.2
10B. Commercially-processed ready-to-eat food, reheated to 135°F (57°C) or above **for hot holding**.	7	10	0	0	54	77.1	9	12.9
11. Handwashing facilities are accessible and properly maintained								
11A. Handwashing facilities are conveniently located and accessible for employees.	58	85.3	10	14.7	0	0	0	0
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.	57	83.8	11	16.2	0	0	0	0
12. Employees practice good hygiene								
12A. Food Employees eat, drink, and use tobacco only in designated areas.	62	91.2	6	8.8	0	0	0	0
12B. Food Employees experiencing persistent sneezing, coughing, or runny nose do not work with exposed food, clean equipment, utensils, linens, unwrapped single-service, or single-use articles.	68	100	0	0	0	0	0	0
13. Consumer advisory								
13. Consumers are properly advised of risks of consuming raw or undercooked animal foods.	13	18.8	6	8.7	0	0	50	72.5

RESTAURANT-FAST FOOD								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
14. Time alone is properly used as a public health control								
14A. When time only is used as a public health control for **4 HOURS**, the food establishment follows procedures to serve or discard food as specified in Section 3-501.19 of the *Food Code*.	12	15.2	3	3.8	17	21.5	47	59.5
14B. When time only is used as a public health control for **6 HOURS**, the food establishment follows procedures to serve or discard food as specified in Section 3-501.19 of the *Food Code*.	0	0	0	0	15	19.2	63	80.8
15. Facilities have adequate equipment and tools for ensuring food temperature control and sanitization of food contact surfaces								
15A. Refrigeration / cold holding units have sufficient capacity to maintain TCS Foods at 41°F (5°C) or below.	63	91.3	6	8.7	0	0	0	0
15B. Hot holding units have sufficient capacity to maintain TCS Foods at 135°F (57°C) or above.	57	81.4	2	2.9	4	5.7	7	10
15C. Refrigeration and hot storage units are equipped with accurate ambient air temperature measuring device.	62	91.2	6	8.8	0	0	0	0
15D. Accurate temperature measuring device, with appropriate probe, is provided and accessible for use to measure internal food temperatures.	63	92.6	5	7.4	0	0	0	0
15E. Accurate temperature measuring devices and/or tests kits provided and accessible for use to measure sanitization rinse temperatures and/or sanitization concentrations.	66	97.1	2	2.9	0	0	0	0
15F. Other (describe in the comments section)	0	0	0	0	0	0	68	100
16. Special processes are conducted in compliance with issued variance/ HACCP plan, when required								
16A. Food establishment conducts reduced oxygen packaging without a variance as specified in Section 3-502.12 of the *Food Code.*	0	0	0	0	16	19	68	81
16B. Food establishment performs specialized process in accordance with approved variance and HACCP Plan when required.	0	0	0	0	8	10.5	68	89.5
16C. Juice packaged in the food establishment is treated under a HACCP Plan to reduce pathogens or labeled as specified in Section 3-404.11 of the *Food Code.*	0	0	0	0	10	12.8	68	87.2
17. Food is received from safe sources								
17A. All food is from regulated food processing plants / No home prepared/canned foods.	67	98.5	1	1.5	0	0	0	0
17B. Shellfish are from NSSP-listed sources. No recreationally caught shellfish are received/sold.	3	3.8	0	0	12	15	65	81.3
17C. Food is protected from contamination during transportation/receiving.	4	5.9	1	1.5	63	92.6	0	0
17D. TCS Food is received at a temperature of 41°F (5°C) or below OR according to Law.	1	1.5	0	0	67	98.5	0	0
17E. Food is safe and unadulterated	67	98.5	1	1.5	0	0	0	0
17F. Shellstock tags/labels are retained for 90 days and filed in chronological order from the date the container is emptied.	0	0	0	0	13	16	68	84
17G. Written documentation of parasite destruction is maintained for 90 days for fish products.	0	0	1	1.3	12	15	67	83.8
18. Toxic materials are identified, used, and stored properly								
18A. Poisonous or toxic materials, chemicals, lubricants, pesticides, medicines, first aid supplies, and other personal care items are properly identified, stored, and used.	62	91.2	6	8.8	0	0	0	0

RESTAURANT-FAST FOOD								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
19. Management and food employees are trained in food allergy as it relates to their assigned duties								
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens	17	25	51	75	0	0	0	0
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	41	60.3	27	39.7	0	0	0	0

2. RESTAURANTS-Full Service

RESTAURANT-FULL SERVICE								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
1. Employees practice proper handwashing								
1A. 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 Food Code	12	18.2	54	81.8	0	0	0	0
1B. Hands are cleaned and properly washed when required as specified in Section 2-301.14 of the *Food Code*	37	56.1	29	43.9	0	0	0	0
2. Bare hand contact restriction								
2. Food employees do not contact ready-to-eat foods with bare hands.	59	89.4	7	10.6	0	0	0	0
3. Food is protected from cross-contamination during storage, preparation, and display								
3A. Raw animal foods are separated from ready-to-eat foods.	52	78.8	14	21.2	0	0	0	0
3B. Different raw animal foods are separated from each other.	65	98.5	1	1.5	0	0	0	0
3C. Food is protected from environmental contamination-actual contamination observed.	64	97	2	3	0	0	0	0
3D. Food is protected from environmental contamination-potential contamination.	29	43.9	37	56.1	0	0	0	0
3E. Other (describe in the comments section)	0	0	2	3	0	0	65	97
4. Food contact surfaces are properly cleaned and sanitized								
4A. Food contact surfaces and utensils are clean to sight and touch and sanitized before use.	35	53	31	47	0	0	0	0
4B. Equipment food contact surfaces and utensils are cleaned and sanitized properly using manual warewashing procedures.	27	40.9	2	3	37	56.1	0	0
4C. Equipment food contact surfaces and utensils are cleaned and sanitized properly using mechanical warewashing equipment.	39	57.4	10	14.7	11	16.2	8	11.8
4D. Other (describe in the comments section)	0	0	0	0	0	0	66	100
5. Foods requiring refrigeration are held at the proper temperature								
5A. 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.	13	19.7	53	80.3	0	0	0	0
5B. Raw shell eggs are stored under refrigeration that maintains ambient air temperature of 45°F (7°C) or less.	40	60.6	6	9.1	14	21.2	6	9.1
5C. Other (describe in the temperature chart and comments section below)	0	0	0	0	0	0	66	100
6. Foods displayed or stored hot are held at the proper temperature								
6A. TCS Food is maintained at 135°F (57°C) or above, except during preparation, cooking, cooling, or when time is used as a public health control.	45	68.2	8	12.1	12	18.2	1	1.5
6B. Roasts are held at a temperature of 130°F (54°C) or above.	1	1.4	1	1.4	35	50	33	47.1
6C. Other (describe in the temperature chart and comments section)	0	0	0	0	0	0	66	100

RESTAURANT-FULL SERVICE								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
7. Foods are cooled properly								
7A. Cooked TCS Food is cooled from 135°F (57°C) to 70°F (21°C) within 2 hours **and** from 135°F (57°C) to 41°F (5°C) or below within 6 hours.	14	21.2	8	12.1	39	59.1	5	7.6
7B. TCS Food (prepared from ingredients at ambient temperature) is cooled to 41°F (5°C) or below within 4 hours.	2	2.9	4	5.9	56	82.4	6	8.8
7C. Proper cooling methods / equipment are used.	14	21.2	13	19.7	36	54.5	3	4.5
7D. Other (describe in the temperature chart and comments section)	0	0	0	0	0	0	66	100
8. Refrigerated, ready-to-eat foods are properly date marked and discarded within 7 days of preparation or opening								
8A. Ready-to-eat, TCS Food (prepared on-site) held for more than 24 hours is date marked as required.	53	80.3	12	18.2	0	0	1	1.5
8B. Open commercial containers of prepared ready-to-eat TCS Food held for more than 24 hours are date marked as required.	62	93.9	3	4.5	0	0	1	1.5
8C. Ready-to-eat, TCS Food prepared on-site and/or opened commercial container exceeding 7 days at ≤ 41°F is discarded.	53	80.3	1	1.5	12	18.2	0	0
8D. Other (describe in the comments section)	0	0	0	0	0	0	66	100
9. Raw animal foods are cooked to required temperature								
9A. Raw shell eggs broken for immediate service are cooked to 145°F (63°C) for 15 seconds. Raw shell eggs broken but not prepared for immediate service cooked to 155°F (68°C) for 15 seconds.	9	12.7	2	2.8	51	71.8	9	12.7
9B. Pork; Fish; Beef; Commercially-raised Game Animals are cooked to 145°F (63°C) for 15 seconds.	15	22.4	0	0	48	71.6	4	6
9C. Comminuted Fish, Meats, Commercially-raised Game Animals are cooked to 155°F (68°C) for 15 seconds.	23	34.3	2	3	38	56.7	4	6
9D. Poultry; stuffed fish; stuffed meat; stuffed pasta; stuffed poultry; stuffed ratite; or stuffing containing fish, meat, poultry, or ratites; wild game animals are cooked to 165°F (74°C) for 15 seconds.	19	28.4	2	3	43	64.2	3	4.5
9E. Roasts, including formed roasts, are cooked to 130°F (54°C) for 112 minutes or as Chart specifies and according to oven parameters per Chart ***(NOTE: This data item includes beef roasts, corned beef roasts, pork roasts, and cured pork roasts such as ham)***	0	0	0	0	46	67.6	22	32.4
9F. Other Cooking Observations (describe in the Comment Section and Temperature Chart).	1	1.3	0	0	13	16.5	65	82.3
10. Cooked foods are reheated to required temperature OBSERVATION								
10A. TCS Food that is cooked and cooled on premises is rapidly reheated to 165°F (74°C) for 15 seconds for hot holding.	4	6	0	0	59	88.1	4	6
10B. Commercially-processed ready-to-eat food, reheated to 135°F (57°C) or above **for hot holding**.	2	3	0	0	61	92.4	3	4.5
10C. Other Reheating Observations (describe in the Comments Section and Temperature Chart below)	0	0	0	0	0	0	66	100
11. Handwashing facilities are accessible and properly maintained								
11A. Handwashing facilities are conveniently located and accessible for employees.	59	89.4	7	10.6	0	0	0	0
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.	53	80.3	13	19.7	0	0	0	0

RESTAURANT-FULL SERVICE								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
12. Employees practice good hygiene								
12A. Food Employees eat, drink, and use tobacco only in designated areas.	57	86.4	9	13.6	0	0	0	0
12B. Food Employees experiencing persistent sneezing, coughing, or runny nose do not work with exposed food, clean equipment, utensils, linens, unwrapped single-service, or single-use articles.	66	100	0	0	0	0	0	0
12C. Other (describe in comments section)	0	0	0	0	0	0	66	100
13. Consumer advisory								
13. Consumers are properly advised of risks of consuming raw or undercooked animal foods.	45	68.2	17	25.8	0	0	4	6
14. Time alone is properly used as a public health control								
14A. When time only is used as a public health control for **4 HOURS**, the food establishment follows procedures to serve or discard food as specified in Section 3-501.19 of the *Food Code*.	11	13.3	7	8.4	29	34.9	36	43.4
14B. When time only is used as a public health control for **6 HOURS**, the food establishment follows procedures to serve or discard food as specified in Section 3-501.19 of the *Food Code*.	1	1.3	0	0	18	24	56	74.7
14C. Other (describe in the comments section)	0	0	0	0	0	0	66	100
15. Facilities have adequate equipment and tools for ensuring food temperature control and sanitization of food contact surfaces								
15A. Refrigeration / cold holding units have sufficient capacity to maintain TCS Foods at 41°F (5°C) or below.	56	84.8	10	15.2	0	0	0	0
15B. Hot holding units have sufficient capacity to maintain TCS Foods at 135°F (57°C) or above.	59	89.4	1	1.5	5	7.6	1	1.5
15C. Refrigeration and hot storage units are equipped with accurate ambient air temperature measuring device.	58	87.9	8	12.1	0	0	0	0
15D. Accurate temperature measuring device, with appropriate probe, is provided and accessible for use to measure internal food temperatures.	59	89.4	7	10.6	0	0	0	0
15E. Accurate temperature measuring devices and/or tests kits provided and accessible for use to measure sanitization rinse temperatures and/or sanitization concentrations.	62	93.9	4	6.1	0	0	0	0
15F. Other (describe in the comments section)	0	0	1	1.5	0	0	65	98.5
16. Special processes are conducted in compliance with issued variance/ HACCP plan, when required								
16A. Food establishment conducts reduced oxygen packaging without a variance as specified in Section 3-502.12 of the *Food Code.*	1	1.1	1	1.1	24	26.7	64	71.1
16B. Food establishment performs specialized process in accordance with approved variance and HACCP Plan when required.	1	1.3	2	2.5	14	17.7	62	78.5
16C. Juice packaged in the food establishment is treated under a HACCP Plan to reduce pathogens or labeled as specified in Section 3-404.11 of the *Food Code.*	0	0	0	0	8	10.8	66	89.2
16D. Other (describe in the comments section)	1	1.5	0	0	0	0	65	98.5

RESTAURANT-FULL SERVICE								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
17. Food is received from safe sources								
17A. All food is from regulated food processing plants / No home prepared/canned foods.	65	98.5	1	1.5	0	0	0	0
17B. Shellfish are from NSSP-listed sources. No recreationally caught shellfish are received/sold.	15	19.7	0	0	12	15.8	49	64.5
17C. Food is protected from contamination during transportation/receiving.	1	1.5	0	0	65	98.5	0	0
17D. TCS Food is received at a temperature of 41°F (5°C) or below OR according to Law.	2	3	0	0	64	97	0	0
17E. Food is safe and unadulterated	64	97	2	3	0	0	0	0
17F. Shellstock tags/labels are retained for 90 days and filed in chronological order from the date the container is emptied.	10	11.8	3	3.5	19	22.4	53	62.4
17G. Written documentation of parasite destruction is maintained for 90 days for fish products.	17	22.1	2	2.6	13	16.9	45	58.4
17H. Other (describe in comments section)	1	1.5	0	0	0	0	64	98.5
18. Toxic materials are identified, used, and stored properly								
18A. Poisonous or toxic materials, chemicals, lubricants, pesticides, medicines, first aid supplies, and other personal care items are properly identified, stored, and used.	55	83.3	11	16.7	0	0	0	0
18B. Other (describe in the comments section)	1	1.5	0	0	0	0	65	98.5
19. Management and food employees are trained in food allergy as it relates to their assigned duties								
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens	21	31.8	45	68.2	0	0	0	0
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	44	66.7	22	33.3	0	0	0	0
19C. Other (describe in the comments section)	0	0	0	0	0	0	66	100

3. RESTAURANTS-Combined

RESTAURANT-COMBINED								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
1. Employees practice proper handwashing								
1A. 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 Food Code	31	23.1	103	76.9	0	0	0	0
1B. Hands are cleaned and properly washed when required as specified in Section 2-301.14 of the *Food Code*	79	59	55	41	0	0	0	0
2. Bare hand contact restriction								
2. Food employees do not contact ready-to-eat foods with bare hands.	121	90.3	13	9.7	0	0	0	0
3. Food is protected from cross-contamination during storage, preparation, and display								
3A. Raw animal foods are separated from ready-to-eat foods.	104	77	18	13.3	1	0.7	12	8.9
3B. Different raw animal foods are separated from each other.	115	83.3	5	3.6	4	2.9	14	10.1
3C. Food is protected from environmental contamination-actual contamination observed.	132	98.5	2	1.5	0	0	0	0
3D. Food is protected from environmental contamination-potential contamination.	61	45.5	73	54.5	0	0	0	0
3E. Other (describe in the comments section)	0	0	2	1.5	0	0	133	98.5

RESTAURANT-COMBINED								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
4. Food contact surfaces are properly cleaned and sanitized								
4A. Food contact surfaces and utensils are clean to sight and touch and sanitized before use.	76	56.7	58	43.3	0	0	0	0
4B. Equipment food contact surfaces and utensils are cleaned and sanitized properly using manual warewashing procedures.	57	42.5	15	11.2	62	46.3	0	0
4C. Equipment food contact surfaces and utensils are cleaned and sanitized properly using mechanical warewashing equipment.	57	40.1	13	9.2	29	20.4	43	30.3
4D. Other (describe in the comments section)	0	0	1	0.7	0	0	133	99.3
5. Foods requiring refrigeration are held at the proper temperature								
5A. 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.	38	28.4	96	71.6	0	0	0	0
5B. Raw shell eggs are stored under refrigeration that maintains ambient air temperature of 45°F (7°C) or less.	64	45.7	8	5.7	32	22.9	36	25.7
5C. Other (describe in the temperature chart and comments section below)	0	0	0	0	0	0	134	100
6. Foods displayed or stored hot are held at the proper temperature								
6A. TCS Food is maintained at 135°F (57°C) or above, except during preparation, cooking, cooling, or when time is used as a public health control.	84	61.8	23	16.9	21	15.4	8	5.9
6B. Roasts are held at a temperature of 130°F (54°C) or above.	1	0.7	2	1.4	51	34.9	92	63
6C. Other (describe in the temperature chart and comments section)	0	0	0	0	0	0	134	100
7. Foods are cooled properly								
7A. Cooked TCS Food is cooled from 135°F (57°C) to 70°F (21°C) within 2 hours **and** from 135°F (57°C) to 41°F (5°C) or below within 6 hours.	20	14.1	13	9.2	74	52.1	35	24.6
7B. TCS Food (prepared from ingredients at ambient temperature) is cooled to 41°F (5°C) or below within 4 hours.	6	4.3	8	5.7	98	69.5	29	20.6
7C. Proper cooling methods / equipment are used.	26	19.3	21	15.6	65	48.1	23	17
7D. Other (describe in the temperature chart and comments section)	1	0.7	0	0	0	0	133	99.3
8. Refrigerated, ready-to-eat foods are properly date marked and discarded within 7 days of preparation or opening								
8A. Ready-to-eat, TCS Food (prepared on-site) held for more than 24 hours is date marked as required.	105	77.8	24	17.8	2	1.5	4	3
8B. Open commercial containers of prepared ready-to-eat TCS Food held for more than 24 hours are date marked as required.	115	85.8	9	6.7	7	5.2	3	2.2
8C. Ready-to-eat, TCS Food prepared on-site and/or opened commercial container exceeding 7 days at ≤ 41°F is discarded.	109	81.3	1	0.7	24	17.9	0	0
8D. Other (describe in the comments section)	0	0	0	0	0	0	134	100

RESTAURANT-COMBINED								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
9. Raw animal foods are cooked to required temperature								
9A. Raw shell eggs broken for immediate service are cooked to 145°F (63°C) for 15 seconds. Raw shell eggs broken but not prepared for immediate service cooked to 155°F (68°C) for 15 seconds.	14	9.4	2	1.3	88	59.1	45	30.2
9B. Pork; Fish; Beef; Commercially-raised Game Animals are cooked to 145°F (63°C) for 15 seconds.	22	15.4	0	0	88	61.5	33	23.1
9C. Comminuted Fish, Meats, Commercially-raised Game Animals are cooked to 155°F (68°C) for 15 seconds.	40	28.4	2	1.4	72	51.1	27	19.1
9D. Poultry; stuffed fish; stuffed meat; stuffed pasta; stuffed poultry; stuffed ratite; or stuffing containing fish, meat, poultry, or ratites; wild game animals are cooked to 165°F (74°C) for 15 seconds.	40	28.6	2	1.4	77	55	21	15
9E. Roasts, including formed roasts, are cooked to 130°F (54°C) for 112 minutes or as Chart specifies and according to oven parameters per Chart ***(NOTE: This data item includes beef roasts, corned beef roasts, pork roasts, and cured pork roasts such as ham)***	0	0	0	0	70	47.3	78	52.7
9F. Other Cooking Observations (describe in the Comment Section and Temperature Chart).	1	0.6	0	0	22	14.3	131	85.1
10. Cooked foods are reheated to required temperature OBSERVATION								
10A. TCS Food that is cooked and cooled on premises is rapidly reheated to 165°F (74°C) for 15 seconds for hot holding.	7	5	0	0	102	72.3	32	22.7
10B. Commercially-processed ready-to-eat food, reheated to 135°F (57°C) or above **for hot holding**.	9	6.6	0	0	115	84.6	12	8.8
10C. Other Reheating Observations (describe in the Comments Section and Temperature Chart below)	0	0	0	0	0	0	134	100
11. Handwashing facilities are accessible and properly maintained								
11A. Handwashing facilities are conveniently located and accessible for employees.	117	87.3	17	12.7	0	0	0	0
11B. Handwashing facilities are supplied with hand cleanser / disposable towels / hand drying devices.	110	82.1	24	17.9	0	0	0	0
12. Employees practice good hygiene								
12A. Food Employees eat, drink, and use tobacco only in designated areas.	119	88.8	15	11.2	0	0	0	0
12B. Food Employees experiencing persistent sneezing, coughing, or runny nose do not work with exposed food, clean equipment, utensils, linens, unwrapped single-service, or single-use articles.	134	100	0	0	0	0	0	0
12C. Other (describe in comments section)	0	0	1	0.7	0	0	133	99.3
13. Consumer advisory								
13. Consumers are properly advised of risks of consuming raw or undercooked animal foods.	58	43	23	17	0	0	54	40

RESTAURANT-COMBINED								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
14. Time alone is properly used as a public health control								
14A. When time only is used as a public health control for **4 HOURS**, the food establishment follows procedures to serve or discard food as specified in Section 3-501.19 of the *Food Code*.	23	14.2	11	6.8	46	28.4	82	50.6
14B. When time only is used as a public health control for **6 HOURS**, the food establishment follows procedures to serve or discard food as specified in Section 3-501.19 of the *Food Code*.	1	0.6	0	0	34	22.1	119	77.3
14C. Other (describe in the comments section)	0	0	0	0	0	0	134	100
15. Facilities have adequate equipment and tools for ensuring food temperature control and sanitization of food contact surfaces								
15A. Refrigeration / cold holding units have sufficient capacity to maintain TCS Foods at 41°F (5°C) or below.	119	88.1	16	11.9	0	0	0	0
15B. Hot holding units have sufficient capacity to maintain TCS Foods at 135°F (57°C) or above.	117	86	3	2.2	9	6.6	7	5.1
15C. Refrigeration and hot storage units are equipped with accurate ambient air temperature measuring device.	120	89.6	14	10.4	0	0	0	0
15D. Accurate temperature measuring device, with appropriate probe, is provided and accessible for use to measure internal food temperatures.	122	91	12	9	0	0	0	0
15E. Accurate temperature measuring devices and/or tests kits provided and accessible for use to measure sanitization rinse temperatures and/or sanitization concentrations.	128	95.5	6	4.5	0	0	0	0
15F. Other (describe in the comments section)	0	0	1	0.7	0	0	133	99.3
16. Special processes are conducted in compliance with issued variance/ HACCP plan, when required								
16A. Food establishment conducts reduced oxygen packaging without a variance as specified in Section 3-502.12 of the *Food Code.*	1	0.6	1	0.6	40	23	132	75.9
16B. Food establishment performs specialized process in accordance with approved variance and HACCP Plan when required.	1	0.6	2	1.3	22	14.2	130	83.9
16C. Juice packaged in the food establishment is treated under a HACCP Plan to reduce pathogens or labeled as specified in Section 3-404.11 of the *Food Code.*	0	0	0	0	18	11.8	134	88.2
16D. Other (describe in the comments section)	1	0.7	0	0	0	0	133	99.3
17. Food is received from safe sources								
17A. All food is from regulated food processing plants / No home prepared/canned foods.	132	98.5	2	1.5	0	0	0	0
17B. Shellfish are from NSSP-listed sources. No recreationally caught shellfish are received/sold.	18	11.5	0	0	24	15.4	114	73.1
17C. Food is protected from contamination during transportation/receiving.	5	3.7	1	0.7	128	95.5	0	0
17D. TCS Food is received at a temperature of 41°F (5°C) or below OR according to Law.	3	2.2	0	0	131	97.8	0	0
17E. Food is safe and unadulterated	131	97.8	3	2.2	0	0	0	0
17F. Shellstock tags/labels are retained for 90 days and filed in chronological order from the date the container is emptied.	10	6	3	1.8	32	19.3	121	72.9
17G. Written documentation of parasite destruction is maintained for 90 days for fish products.	17	10.8	3	1.9	26	16.5	112	70.9
17H. Other (describe in comments section)	1	0.8	0	0	0	0	131	99.2

RESTAURANT-COMBINED								
Number of INFORMATION STATEMENTS	**IN**	**IN %**	**OUT**	**OUT %**	**NO**	**NO %**	**NA**	**NA %**
18. Toxic materials are identified, used, and stored properly								
18A. Poisonous or toxic materials, chemicals, lubricants, pesticides, medicines, first aid supplies, and other personal care items are properly identified, stored, and used.	117	87.3	17	12.7	0	0	0	0
18B. Other (describe in the comments section)	1	0.7	0	0	0	0	133	99.3
19. Management and food employees are trained in food allergy as it relates to their assigned duties								
19A. The person in charge accurately describes foods identified as major food allergens and the symptoms associated with major food allergens	39	29.1	95	70.9	0	0	0	0
19B. Food employees are trained in food allergy awareness as it relates to their assigned duties.	86	64.2	48	35.8	0	0	0	0
19C. Other (describe in the comments section)	0	0	0	0	0	0	134	100

REFERENCES

Reinventing Food Regulations (1996), National Performance Report
http://govinfo.library.unt.edu/npr/library/rsreport/foodreg.html

Report of the FDA Retail Food Program Database of Foodborne Illness Risk Factors (2000)
http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodborneIllnessandRiskFactorReduction/RetailFoodRiskFactorStudies/ucm123544.htm

FDA Report on the Occurrence of Foodborne Illness Risk Factors in Selected Institutional Foodservice, Restaurant, and Retail Food Store Facility Types (2004)
http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodborneIllnessandRiskFactorReduction/RetailFoodRiskFactorStudies/ucm089696.htm


Get the message...
Wash Your Hands!
SOAPY
SOAPY
SOAPY
How To Wash
Rinse under warm, running water
Apply soap
Rub vigorously for at least 15 seconds
Thoroughly rinse under warm, running water
Immediately dry with disposable paper towels
When To Wash
When entering the kitchen
After touching your face, hair, or skin
After using the restroom
After handling raw animal product
After taking out the trash or cleaning
After handling ANYTHING dirty!
PRO TIP
Use paper towels to turn off faucet
SNHD
Southern Nevada Health District


Reciba el mensaje..
¡Lávese las manos!
JABONCITO
JABONCITO
JABONCITO
Cómo lavárselas
Cuándo lavárselas
Enjuage con agua corriente tibia
Aplique jabón
Frote vigorosamente durante al menos 15 segundos
Enjuage con agua corriente tibia
Séquese inmediatamente con toallas de papel desechables
Cuando entra a la cocina
Después de tocarse la cara, el pelo o la piel
Después de usar el baño
Después de manipular productos animales crudos
Después de sacar la basura o limpiar
¡Después de manipular CUALQUIER cosa sucia!
CONSEJO
Use toallas de papel para cerrar el grifo
SNHD
Southern Nevada Health District

SIDE DISH ACCREDITATION UPDATE

FEBRUARY 16, 2018

Health District successfully submits documentation to Public Health Accreditation Board (PHAB)!

We did it!

On January 31 we uploaded our documents to the e-PHAB site and hit the send button!

Documentation is considered one of the key components of the accreditation process because it demonstrates how a health department conforms to the standards and measures established by the Public Health Accreditation Board (PHAB).

Now that our documents have been submitted, an accreditation specialist will review our application for accuracy, and compliance with the standards and measures. Once the review is completed, a site visit team will be assigned to us within 3-6 months. The site visitors are PHAB-trained and will interview the leadership team, community partners, and key department staff as part of their visit.

Site visitors will submit a final report to the PHAB Accreditation Committee for review and the committee will determine our accreditation status.

Once we are accredited, the Health District will be expected to submit annual reports and reapply for accreditation every five years.

Quality Improvement — Go Team!

At its core, Quality Improvement is a team process. Under the right circumstances, a team draws from the knowledge, skills, experience, and perspectives of different individuals within the team to make lasting improvements.

Whether we are seeking to improve client wait times, customer service, diabetes self-management, or other goals, it will take a team effort to achieve significant and lasting improvements.

Quality Improvement is a component of our District-wide Performance Improvement System and a key piece of the accreditation process.

Through active involvement in the SNHD Quality Improvement (QI) team, I am committed to the development of a Culture of Quality where QI is institutionalized in the common values, attitudes, goals at all levels within the organization. — Maria Azzarelli

Accreditation Works!

In the United States, nearly 198 million people are served by a PHAB-accredited health department.In surveys of accredited health departments, most of the respondents agreed or strongly agreed that accreditation had many benefits. Participants found that accreditation:

- stimulated quality and performance improvement opportunities;
- better identified strengths and weaknesses;
- documented the ability to deliver the three core functions of public health, and the 10 Essential Public Health Services;
- stimulated greater accountability and transparency; and
- improved the leadership management processes.

Public Health Accreditation Board, 2016

PHAB
Advancing public health performance

PHAB PHACTS

Since the launch of the national accreditation program in 2011, a total of 211 public health departments have achieved national accreditation status.

Congratulations to Jim Osti, Quality and Performance Improvement Coordinator

Jim Osti has been named the Quality and Performance Improvement Coordinator. He is responsible for coordinating our Performance Improvement System, which includes Quality Improvement, Performance Management, Workforce Development, the Community Health Assessment, the Community Health Improvement Plan, the Strategic Plan, health equity, and accreditation.

Keeping you linked in...

Healthy Southern Nevada
www.healthysouthernnevada.org

Public Health Accreditation Board
www.phaboard.org

Contact Us

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ADVANCING PUBLIC HEALTH THROUGH ACCREDITATION

Southern Nevada Health District