

2012

Samuel J. Crumbine

Consumer Protection Award



Division of Environmental Health
788 East Woodoak Lane
Murray, UT 84107





Bureau of Food Protection
788 East Woodoak Lane
Murray, Utah 84107
385-468-3845

March 7, 2012

The Crumbine Award Jury
Foodservice Packaging Institute
201 Park Washington Court
Falls Church, VA 22046

Re: 2012 Samuel J. Crumbine Award Application—Salt Lake Valley Health Department

Esteemed Members of the Crumbine Award Jury:

After careful review of the invaluable feedback received from the Crumbine Award Jury regarding our 2011 application, we made the decision to reapply for 2012. We feel that we have addressed the concerns and issues that were mentioned: the scoring system not based on FDA criteria; website ranking system with scores/stars; and, more emphasis on the 2005 Efficiency and Quality Study as a baseline for overall program development.

Approximately nine years ago, the Salt Lake Valley Health Department made the decision to develop a risk-based system as a framework for performing our regulatory responsibilities. At the same time, we enrolled in the FDA's Retail Food Regulatory Program Standards. We felt that aligning ourselves with these standards would help us establish a highly successful program. We also set a goal to apply for the Crumbine Award. Five testimonial letters in this year's application make specific reference to our program's significant accomplishments and the extensive redevelopment that has taken place.

We also wanted to point out some program highlights and enhancements from this past year. First, our agency took the lead on identifying an illegal processor who was manufacturing Queso Fresco in his home. This Queso Fresco was the cause of a large outbreak of *Salmonella* Newport. Second, we are developing an annual award certificate to recognize the highest performing food establishments in each of four inspection risk levels. These certificates will be awarded beginning in January, 2013. Third, our Health Regulation #5 was revised to include a progressive enforcement component to assist us with establishments that are repeatedly closed due to imminent public health hazards. More specific details regarding these program highlights can be found in the *Program Longevity* section of the Program Description.

It is apparent that development of an outstanding regulatory food program is a work in progress. Our agency is fully committed to strive for continual improvement because restaurant operators, the general public, and regulators all want the same thing—a safe and enjoyable dining experience for everyone.

Sincerely,

A handwritten signature in dark ink, appearing to read "Bryce C. Larsen". The signature is fluid and cursive, written over a light-colored background.

Bryce C. Larsen, M.P.A., L.E.H.S.
Manager, Bureau of Food Protection

EXECUTIVE SUMMARY

In 2005, an Environmental Health Scientist from the Salt Lake Valley Health Department (SLVHD) Bureau of Food Protection (BFP) completed a study for a Master of Science and Technology Program at the University of Utah. This study was developed with input from the management of the Bureau and the Environmental Health Director to innovate new approaches for improving public health in the food industry. The title of the study was “Food Service Inspection: Establishing a Facility Scoring System and Evaluating Quality of Inspections.” The results of this study laid the foundation for helping BFP realize its goal of becoming a recognized leader in local food safety regulation.

Two areas of primary focus were determined. The first area of focus was the full-scale development of a risk-based inspection system. Second, the decision was made to align the food program more closely with the FDA’s Voluntary National Retail Food Regulatory Program Standards.

Early in the process of redevelopment it was felt that in order to be successful, it was essential to establish effective working relationships with industry, peer agencies, academia and the general public. Additionally, a goal was set to apply for the Samuel J. Crumrine Consumer Protection Award at some point in the future.

Three principal innovations are highlighted in this application. First, BFP developed a close working relationship with SLVHD’s Bureau of Epidemiology. Second, BFP partnered with institutions of higher learning with three primary goals in mind: analyze its regulatory food program from a scientific standpoint; establish relationships with the medical students and educate them about BFP’s role in promoting public health; promote regulatory food safety as a career option for public health students. Third, BFP created a state-of-the-art website for posting inspection results online that included a relative ranking system. An important component of the website was full implementation of an electronic inspection program. One of the driving forces behind developing the website from a political and administrative perspective was to become more transparent as a regulatory agency. It was determined that the website needed to be an educational tool for the general public and for managers of retail food service establishments.

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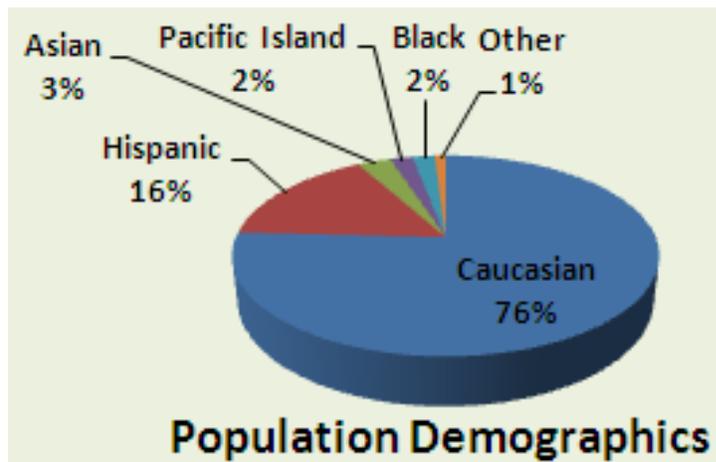
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PART I: PROGRAM BASICS

DEMOGRAPHIC PROFILE

Salt Lake City is the capital of Utah and is located in the shadow of the majestic Wasatch Mountain Range. The city was established by Mormon Pioneers led by Brigham Young who first entered the Salt Lake Valley in 1847. According to the most current census data, Salt Lake County's estimated population is 1,034,989 out of 2,817,222 in the entire state. However, during the business week, the population increases substantially due to commuter traffic from four large neighboring counties. This is quite notable from a public health perspective due to the increased load that it places on retail food service establishments that are regulated by Salt Lake Valley Health Department (SLVHD). The County's total population from April 1, 2000 to July 1, 2010 increased by 14.6%. The median age was 28.5 years. Salt Lake County consists of 16 incorporated cities and an unincorporated area comprised of various townships and communities. Salt Lake County is a culturally diverse community with notable representation from many different ethnic groups.

Salt Lake City is within a 30-minute drive of seven world class ski resorts that lay claim to the "Greatest Snow on Earth". The heart of downtown Salt Lake City is currently undergoing a two billion dollar makeover entitled *City Creek Center*. It will consist of a mix of retail/commercial and residential housing that will be anchored by a large, outdoor shopping plaza. The grand opening of the City Creek Center is scheduled for March 22, 2012. Salt Lake City is home to the NBA's Utah Jazz, 2009 MLS Cup Champion Real Salt Lake, Salt Lake Bees (triple A affiliate to the Los Angeles Angels of Anaheim), and the Utah Grizzlies (minor league hockey). The University of Utah, Westminster College, and the Salt Lake Community College are located in the Salt Lake Valley as well. Salt Lake City is known for its clean, wide streets and friendly residents.



RESOURCES

The total budget for the Bureau of Food Protection (BFP hereafter) in 2011 was \$1,713,306. The three revenue sources are the General Tax Fund (10%), Grants from the Utah Department of Health (2%), and Fees for Service (88%). Presently, there are 22 full-time staff in the bureau. The management team consists of a Bureau Director and three Supervisors. There are two Office Specialists and 16 Environmental Health Specialists (EHS). The Environmental Health Division operates under the generalist concept; therefore some of the bureau inspectors work in other Division programs as well.

At the end of 2011, Salt Lake County had 3920 permitted food establishments and had issued 1475 temporary food establishment permits. Of the 3920 permanent food establishments, 3111 are retail food service establishments, 639 are institutional establishments (such as schools, hospitals, child care, or elderly care), and 170 are mobile units. A comprehensive cost analysis was conducted in order to determine fees for permanent establishments as well as for other program-related fees such as temporary event permits, and plan reviews (Table 1).

Food Establishment Permit Fees		Temporary Event Permit	
Level 1	\$150	Low Risk 1 Day	\$45
Level 2	\$265	Low Risk 3 Day	\$50
Level 3	\$380	Low Risk 14 Day	\$295
Level 4	\$495	High Risk 1 Day	\$65
Plan Review Fees		High Risk 3 Day	\$95
Level 1	\$350	High Risk 14 Day	\$395
Level 2	\$550	Food Cart/Mobile Fees	
Level 3	\$800	Level 1	\$220
Level 4	\$1200	Level 2	\$255
Cart/Mobile/Shaved Ice	\$250	Level 3	\$305

VISION, GOALS, AND OBJECTIVES

The BFP's vision was to reduce the incidence of foodborne illness by lowering the amount of critical violations and the critical risk factors associated with disease transmission. BFP also sought to become a widely recognized leader among the public, operators, and peer agencies with regard to food safety. The following goals were set with this vision in mind: 1) redevelop the operating guidelines; 2) enroll in the FDA's Retail Food Program Standards; 3) expand staff training opportunities; 4) formulate a plan for reducing the average number of critical violations in retail food service establishments (Appendix A); 5) develop a working relationship with the SLVHD's Bureau of Epidemiology that defines roles more specifically with regard to conducting foodborne illness investigations and with conducting ongoing surveillance of food-related disease in Salt Lake County; 6) redevelop the plan review program; 7) redevelop the temporary food event/mass gathering program; 8) create a specialized program for regulating food carts; 9) expand educational outreach to the community with strong consideration of cultural diversity; 10) develop innovative and collaborative partnerships with the local university and colleges on various projects to promote public health and create awareness among students regarding public health as a viable career option; 11) develop a highly innovative website for posting inspection results online; 12) increase overall involvement and collaborative efforts with industry with the intent of more actively promoting food safety as partners.

PART II: BASELINE AND PROGRAM ASSESSMENT

REGULATORY FOUNDATION

The Salt Lake Valley Health Department (SLVHD) derives its regulatory authority as a local health department from Utah State Statute 26A. The BFP utilizes Health Regulation #5 (HR5) to conduct inspections of retail food service establishments located in Salt Lake County. HR5 is an adaptation of the Utah Department of Health's (UDOH) Food Service Sanitation Regulation, R392-100. The Utah Food Service Sanitation Regulation, R392-100 is an adaptation of the 2009 FDA Model Food Code.

The Food Service Sanitation Regulation, R392-100 mandates that all permanent food establishments are either inspected twice per year, or that a risk-based system be used to assign inspection intervals. In Salt Lake County, all permanent establishments are assigned to one of four risk levels based on their inherent risk. Risk levels are determined by using a Risk Assessment Worksheet (Appendix B) that focuses on three elements: menu diversity, food processes, and daily meal volume. Risk levels dictate inspection intervals, which are twelve months for level one, nine months for level two, six months for level three and four months for level four. In 2011, using a risk-based system allowed SLVHD to reduce the mandated number of annual routine inspections by 1468, which was beneficial to SLVHD in a time of limited resources. More importantly, the risk-based system reduced the required number of routine inspections of low-risk beverage-only establishments, making it possible to spend more resources on establishments whose inherent risk is higher.

Risk Level	Inspection Interval	Number of Establishments	Annual Inspections
1	12 months	982	982
2	9 months	1286	1710
3	6 months	1276	2552
4	4 months	376	1128
	totals	3920	6372
<i>Annual inspections required in 2-per-year system=7840</i>			

STAFF TRAINING PROGRAM

In 2008, BFP hired three new inspectors, all of whom were under the supervision of different managers, and consequently, received different methods of training. To overcome this inconsistency, a New Hire Checklist was developed and put into place. The checklist covered items to be completed prior to the new EHS start date, necessary administrative details, and training exercises including a BFP Food Code exercise called “Where would you Mark It” (Appendix C). Field training included joint inspections with other trained EHS staff, solo inspections in low-risk facilities, and then more joint inspections. Following the field training, an inspection area was assigned. After the first year it was determined that the training for these new EHS was inconsistent from supervisor to supervisor, and a more formalized approach was needed. In 2009, the BFP management determined that the FDA training model would be utilized for training new inspectors. A committee of EH inspectors was formed for the purpose of developing a training program for all new EH inspectors. The committee used the FDA model for the new EHS in the food program and incorporated input from the inspectors’ view. In 2010, the BFP hired a new EHS who worked through the model. In a short amount of time, there was a rapid learning curve resulting in this EHS contributing quality work toward the BFP goals.

Step 5 of FDA Standard No. 2 required 20 contact hours of continuing education every 36 months. The Utah Division of Occupational and Professional Licensing required every EHS to complete 30 Credit Education Units every two years in order to maintain their EHS License. This was achieved by attending the Utah Environmental Health Association’s (UEHA) education conferences, and by the many opportunities brought to the State of Utah by FDA.

In the past six years, FDA presented a variety of courses in Utah for the local health departments which typically were co-sponsored by the Utah Department of Agriculture and Food and the Utah Department of Health. These courses were well attended by BFP staff and included: Plumbing and Cross Connection in Retail Food Facilities, Microbial and Chemical Hazards Associated with the FDA Process Approach, Managing Retail Food Safety Application of HACCP Principles in Retail Food Service, Food Facility Plan Review, Temporary Food Inspections, Reduced Oxygen Packaging, and Sushi training including parasite destruction, recording keeping and requirements for acidified sushi rice. FDA often utilized members of BFP to assist in these courses by having them present the training, or coaching in-field workshop activities.

Training that is specific to BFP is provided during staff meetings using BFP Operating Guidelines (Appendix D). Other trainings include Food Cart, Mobile Food Unit and Shaved Ice Stand Guidelines, Temporary Food Events, Temporary Mass Gatherings and trainings on the SLVHD [Health Regulation #5](#) “Food Sanitation Regulation”.

INSPECTION PROGRAM BASED ON HACCP PRINCIPLES

Until 2009, all BFP inspection forms were written by hand on paper. Although inspections on paper forms were reasonably effective, they were not without their drawbacks. One of the most common complaints from food service managers was that they could not read their inspector's writing. This complaint was also common among health department managers that had to review inspection reports. One of the most common complaints from inspectors was that they had to sit at a computer and manually type the completed inspection into a database, which reduced their available time for field inspections. Clerical staff often complained about having to file endless piles of inspection reports into filing cabinets.

Mobile Inspection Technology. The mobile inspection form implemented in 2009 (Appendix E) is patterned after the FDA model Food Establishment Inspection Report, including the Foodborne Illness Critical Factors that are in or out of compliance. The inspection form gives the person in charge very detailed information about where critical factors are not being controlled, and if they have been corrected on site. There is also a general comments section where instructions may be given to the person in charge, particularly when a corrective action plan is required for out of control risk factors.

One of the most helpful features of the mobile inspection program is the Inspection History (Appendix F). This feature was developed so that inspectors could quickly look up past inspections to identify repeat violations of critical factors and take appropriate action. Critical factors are expected to be corrected immediately, before the inspector leaves the establishment. When immediate correction is not possible a follow-up inspection is conducted to ensure that all critical factors are corrected.

Another valuable feature of the mobile inspection program is the inclusion of food safety brochures. When an inspector discovers that a food establishment has an out-of-control risk factor, a food safety brochure that addresses that risk factor is printed for the person in charge. The inspector will then use the brochure as a training tool to teach the person in charge correct food safety techniques and to encourage active managerial control. For detailed information about SLVHD's food safety brochures, see Part 3 of this application.

With the inception of the mobile program, inspections became more efficient because SLVHD incorporated "canned" violation statements into the mobile device that greatly reduce the amount of hand writing. An EHS has the option to use a canned statement, but can also edit the statement to make it more specific to a particular observation. Canned violation statements also improve consistency of violation statements across the inspectors. Manual data entry was eliminated because inspections were uploaded to the database electronically. Data management was also facilitated because the mobile software generated a PDF document that was an exact replica of the inspection report, and there was no need to retain hard copies in filing cabinets. Inspection reports can be accessed from the database anytime, and are complete with the inspectors' and food establishment managers' signatures. Food establishments have the option to go paperless by requesting that the electronic inspection results be emailed to them rather than printed. Yet another benefit to food managers is that electronically generated inspection reports are far more legible than handwritten versions.

QUALITY ASSURANCE PROGRAM

BFP has completed and been audited for The FDA Voluntary National Retail Food Regulatory Program Standards 1: Regulatory Foundation, 3: Inspection Program Based on HACCP Principles, 5: Foodborne Illness and Food Defense Preparedness and Response, and 7: Industry and Community Relations. Currently, BFP is working on Standard 2: Trained Regulatory Staff. Since 2006, BFP has maintained one supervisor who is an FDA Standardized Officer. This Officer has been standardized by Mario Seminara, R.S. Regional Food Specialist. This has been done so that this Officer can assist, when needed by the Utah Department of Health, in standardizing other local health departments.

In 2006, BFP with other environmental health bureaus developed an employee appraisal system that was adopted by the SLVHD and other county agencies. Most components of this system have recently been included in a new county wide system that now includes individual Job Performance and Development Goals.

EHS Efficiency and Quality Study. In 2005, an EHS from BFP completed a study for a Master of Science and Technology Program at the University of Utah. The study was developed with input from BFP, and the Environmental Health Director, using BFP data, to innovate new approaches for improving public health. The study, entitled “Food Service Inspection: Establishing a Facility Scoring System and Evaluating Quality of Inspections,” had three main objectives:

1. Analyze the number of violations in each food facility in the county, in order to develop a ranking system for all facilities within the same risk levels.
2. Analyze the inspection quality for each inspector by determining the number of violations and the frequency each inspector cited a violation over a given period.
3. Identify the specific training needs of inspectors and make training recommendations.

The EHS conducting this study and a statistician from the University of Utah determined that a scoring system of assigning a 1, 3, or 6 (non-critical, moderately critical, critical) point value to each violation was to be used to rank food establishments. The study determined that quality was not impacted by geographical areas of the Salt Lake Valley and that most inspectors were citing a similar number of violations.

The following recommendations were made: 1) Increase inspection frequency of the facilities with the worst scores and decrease the frequency for the facilities with the best scores. 2) Rank food establishments with others in the same risk level. 3) Share information about competitive ranking with establishments. 4) Standardize all EHS using FDA standards. 5) Conduct statistical analysis for individual inspectors with the purpose that the outlying inspectors would receive training to bring them closer to the average number of violations being cited. All recommendations but the first were implemented. It was determined that the existing risk assessment system was still the most effective way to assign inspection intervals.

Internal quality assurance was improved with the implementation of field computer tablets. Inspection reports were more concise and readable, producing more accurate records that were immediately filed in a database server. Joint inspections for seasoned as well as new inspectors are encouraged by management as a means for EHS to learn from one another.

Temporary Events. Historically, the temporary event program was dreaded by most inspectors, causing concern for the quality of inspections. In 2008, BFP developed a temporary food program that inspectors desired to work in and compete for. This was accomplished by making changes in BFP operating procedures. Extensive reviews of the risks involved with temporary food vendors were completed. The single price permit was replaced with low and high risk permits. New fees were developed which lowered the permit price for low risk vendors and increased them for high risk vendors. The new permits allowed the BFP to triage vendors, resulting in fewer inspections of low risk vendors and more focus on high risk vendors.

BFP worked closely with SLVHD Administration to build a program that was equitable to the EHS who were in the temporary food program. EHS were given the option to receive compensation at 1.5 times the value in the form of money rather than time off only. Because most events took place during non-work hours, more flexibility was given to the EHS in amending their schedules. Improvements in mileage reimbursement were also granted. These changes greatly improved EHS attitudes resulting in improved inspection quality.

Late fees were implemented for applications received less than 2 weeks prior to an event. Food vendors now meet with an EHS earlier, thereby giving BFP more planning time, and the vendor adequate time to ensure proper setup and review of food safety guidelines in the BFP Temporary Food Service Guide (Appendix G).

FOODBORNE ILLNESS COMPLAINT AND RESPONSE SYSTEM

Although an automated data management system was in place for reportable diseases, SLVHD wanted to establish a reporting mechanism for persons with possible foodborne illness to identify food establishments requiring an immediate inspection. In 2005, a new surveillance method of tracking suspect foodborne illnesses was established. The objectives of this automated system were 1) to combine the foodborne illness complaints with the reportable disease database for trend analysis on food service establishments; 2) to rapidly detect and respond to clusters of illnesses from implicated food service establishments, group settings and implicated food items in order to intervene in a timely manner; and 3) to encourage the use of SLVHD's existing foodborne illness phone line by the public and establish an online reporting website.

To accomplish program goals and objectives the following procedures were implemented:

(1) EHS were trained to screen foodborne illnesses and a rotating "duty officer" schedule was established to ensure that an EHS is available by phone or in person at the BFP office from 8:00 AM to 5:00 PM every business day. Using a standardized form (Appendix H), the duty officer electronically enters complaints that are phoned in or e-mailed to the Health Department by the public. A calling tree was established to immediately alert the appropriate personnel in the Bureau of Epidemiology when a potential foodborne outbreak was detected. In addition to the regular business hours phone line, an emergency response phone number was set up at SLVHD to provide 24/7 coverage. The emergency response team was trained to recognize foodborne illness outbreaks, with measures in place to alert epidemiology staff after hours. Case information gathered by duty officers includes demographics, food history, illness status, signs and symptoms, incubation time, duration and medical information if necessary. This information is immediately available to epidemiologists electronically and becomes part of the reportable disease database.

(2) Surveillance is conducted by epidemiology staff on a daily basis for trend analysis. A foodborne illness investigation is triggered when a food establishment is reported to SLVHD as an illness source by two unrelated households within 14 days, or when there is compelling epidemiological evidence that an outbreak is occurring. The 14-day cutoff is based on the likelihood that 14 days would capture the more commonly reported enteric pathogens. (The original period was 50 days to account for the incubation period of Hepatitis A, but was reduced in 2009 because of a dramatic decrease in Hep A reports during the previous 5 years.) When illness reports meet the investigation criteria, an inspection request is sent by Epidemiology staff to BFP.

(3) A foodborne illness investigation is conducted by an EHS within 24 hours, or immediately if an outbreak is believed to be actively occurring. A standardized questionnaire was developed (Appendix I) that is to be completed by the EHS with the person in charge of the food establishment. This questionnaire includes information such as food distributors, travel history of employees, second jobs of employees, sick policies of the establishment and unusual circumstances at the facility such as loss of water or power. Depending on the circumstances, a HACCP-based food flow chart (Appendix J) may also be completed. All investigation forms and charts are frequently reviewed and updated to ensure that they are effective.

Outcomes: From 2005-2009 there was an average of 372 foodborne illness reports per year, and an average of 70 investigations per year. This system has been refined with the implementation of standards, guidelines and process reviews on a continual basis and was awarded the designation of "Model Practice" by NACCHO in 2006 (Appendix K).

(4) In an effort to generate more awareness and use of the food protection complaint line and online reporting system, an informational flyer was created and posted in emergency rooms, urgent care facilities, physicians' offices, health department clinics and recreational facilities. Duty officers noticed that foodborne illness victims who called in to report their illness were not comfortable speaking about their symptoms and other details of their illness. To address this issue, SLVHD enlisted the help of reportfoodpoisoning.com in 2009 to provide a mechanism whereby ill persons could report all of the necessary information in an online form rather than speak to an EHS on the phone. Since this reporting method has been in place, over one quarter of all foodborne illness complaints have come from the web-based form.

COMPLIANCE AND ENFORCEMENT

The BFP Mission Statement is “Promote food safety and public health through inspections, education, and regulation of food service operations”. BFP adopted the 2009 FDA Model Food Code – along with some additional requirements – under the name of the Salt Lake Valley Health Department [Regulation #5](#), Food Sanitation Regulation. Operating guidelines (Appendix D) were developed and adopted on January 29, 2007 for the purpose of providing a guide that enables an EHS to complete day-to-day tasks in a uniform manner. The guidelines focus on three main categories: Inspector Tasks, Enforcement Activities, and Plan Review Activities. Each guideline has a stated goal and an outline with steps to follow in order to achieve the goal. The Guidelines that address compliance and enforcement activities related to follow-up inspections for out of control risk factors and timely correction of code violations are #1 – Conducting a Routine Inspection, #3 - When to Perform a Follow Up Inspection, #4 – How to Perform a Follow Up Inspection, #14 - Imminent Health Hazards Requiring Permit Suspension, #17 - Notice of Violation and #18 - Enforcement Meeting with an Operator.

Follow-up inspections with a \$100 fee are performed for verification of compliance, and when there are violations related to out of control risk factors associated with inadequate capacities, temperature controls, hygiene or knowledge. Follow-ups are typically unannounced, unless for example, replacement of equipment is being required and those time frames are unknown due to outside influences such as availability or ordering status. The response time for follow-ups is dependent on severity of violations, combination of violations, and the need for further education or increased managerial control.

An Enforcement Meeting with the food service operator is conducted after a routine inspection has verified an imminent health hazard that results in immediate closure of the establishment or in situations when an operator is not responding to the initial routine inspection and subsequent follow-ups. An enforcement meeting must be completed, and a follow-up inspection for verification of compliance is required prior to the facility re-opening. The majority of meetings are conducted within 24 hours of the operator’s request for a meeting. These meetings take place at the BFP office with a supervisor and the EHS who completed the inspections. During the enforcement meeting, the operator must explain to the EHS and supervisor how all violations have been corrected or explain what plan is in place for operational changes, further managerial controls to be implemented, or additional education to be received. A risk control plan and a contract stating the agreed-upon actions are drafted and signed.

Follow-up inspections conducted to verify correction of code violations not resulting in a closure of the restaurant are completed within two to seven days of the original inspection, depending on the severity of the violations. Between January 2008 and December 2010, 1005 follow-up inspections were conducted in Salt Lake County at 551 restaurants. These follow-up inspections showed an 86% reduction of critical factors and 49 % reduction of non-critical violations.

Inspection frequency at a food establishment may be increased to more regularly verify continued compliance. The establishment will return to its regular inspection interval once it is determined that risk factors have been adequately controlled.

BFP has faced many challenges with food carts and mobile food units. It was not uncommon for these operations to be closed several times per year because of imminent health hazard resulting from inadequate hand washing systems due to frozen plumbing. Because BFP identified the problem early in the permitting of carts, it has routinely conducted an innovative “blitz” of the food carts during periods of cold temperatures. During the blitz, inspectors are assigned to inspect all of the carts during a one-day period. To better address the closure of food carts due to frozen plumbing, HR #5 was reopened and amended in 2009, and food cart permits were expanded from one standard food cart permit to include a year round permit and a seasonal permit. Year-round (cold weather) carts were required to have adequate facilities and equipment so that frozen plumbing would not result from sub-freezing conditions.

COMMUNICATION AND INFORMATION EXCHANGE

BFP exchanges food safety information with industry, academia and community groups. For many years BFP has taken an active role in the business community of Salt Lake County by participating in Utah Restaurant Association (URA) meetings and conferences. BFP also participates in the Utah Food Safety Task Force, an innovative and unique stand-alone organization consisting of representatives from industry, local health departments and academia.

Media as Information Exchange Forums. BFP enjoys a positive relationship with the local media outlets and utilizes those connections to provide news segments in print as well as on radio, internet and television related to food safety: safe food storage temperatures, proper food preparation, Thanksgiving leftovers and summer barbecues. Numerous news stories have appeared on air or in print that highlight BFP activities (Appendix L).

Food Safety Education Activities. BFP staff believes that food safety training is a vital part of their responsibilities. To accomplish that objective, they have responded to over 350 requests for education and training outside of the routine food handler courses. Valuable feedback is received from these activities regarding BFP roles and responsibilities.

Job Shadows, Academia Collaboration for Education and Information. Within SLVHD's jurisdiction are located the University of Utah, Westminster College and Salt Lake Community College, which have degree programs in medicine, public health, nursing and environmental health. BFP believes that this has created a unique opportunity to provide educational information to future partners, health workers and public health regulators. Each year, over 175 students accompany an EHS during routine inspections. In addition to conducting joint inspections, BFP staff lecture in environmental and public health courses taught at all of these institutions. In 2008, a partnership was formed with the University of Utah Department of Family and Preventive Medicine wherein medical students accompany an EHS during routine inspections as part of their required medical rotations. This program has become extremely popular with the medical students and provides them with an understanding of BFP and its responsibilities regarding food safety. It also bridges the gap between private medical providers and public health. Each year since 2008, over 100 routine inspections have been conducted with medical students observing.

Positive responses have been received from the medical students regarding the shadow program and the information gained from the working relationship between public and private health. One medical student wrote "As a physician I will now be better prepared to take a relevant food history in cases where I suspect food poisoning. I can ask about proper cooking and storage of high risk foods". Another wrote "The health department inspectors are essential to decrease the amount of disease that is spread throughout the community. I will pay more attention and look for clues of an outbreak of a disease due to food supply". Regarding the inspector's role of an educator, a medical student said "A health inspection is not only a policing of basic public health principles, but also provides an educational opportunity for the public. This educational point is an essential component of any health inspection because it can positively influence behavior change on an individual level in the given restaurant." Dr. Christy Porucznik raved about her experience with this program in a [video testimonial](#).

Interagency Collaboration for Increasing Information Exchange. BFP has established and maintains active partnerships with a number of state and local agencies including the Conference of Local Environmental Health Administrators (CLEHA) Food Safety Committee, a collaborative effort with representatives from the Utah Department of Health, Utah Department of Agriculture and Food, and local health departments throughout the state. BFP also participates in conference calls with FDA and CDC when multi-state outbreaks occur.

Communication through Manager/Food Worker Training Partnerships. Food Handler Courses in Salt Lake County are provided through an agreement with the local school districts and an online training contractor. In accordance with BFP's commitment to education, the number of course locations and times was augmented over the past five years. BFP enjoys a diverse staff that is able to communicate with a variety of individuals and communities. Native languages spoken by Bureau personnel include Spanish, Cantonese, Mandarin, Vietnamese and Polish. BFP also has employees who speak Portuguese, Japanese, Korean, Spanish and Mandarin as second languages.

PROGRAM SUPPORT AND RESOURCES

In the beginning of 2006, after reviewing the FDA's Retail Food Program Standard #8, BFP conducted a needs assessment to establish a baseline level for the budget, staff, and equipment. In addition, a proactive surveillance system was developed to help reduce critical risk factors that are known to contribute to foodborne illness.

After reviewing adequate staffing levels for local regulatory food inspectors as determined by FDA, it was determined that BFP was deficient. Beginning with the budget cycle for 2007, a request for additional full-time employees was proposed in the SLVHD's Five-Year Plan and it has been included in subsequent budget requests from that time to present. Due to the economic downturn that paralleled this time frame and subsequent budget cuts, BFP has been unable to reach optimum staffing levels. In 2008, BFP had to permanently relinquish a food inspector allocation after the employee resigned from the agency. Nevertheless, BFP will continue requesting additional FTEs during each budget cycle.

Results of the needs assessment also revealed that BFP did not have sufficient equipment. A plan was formed with the following components: First, BFP increased the budget request for inspection-related equipment. These budget requests accounted for the needs of new inspectors, as well as a replacement schedule due to technology changes and worn out or damaged equipment. A senior EHS was assigned to permanently oversee all equipment ordering, calibration, and general maintenance of the inventory. Second, BFP committed to implement a fully electronic inspection program in conjunction with an innovative website for posting inspection results online. Both have been phased in over the past four years and details can be found in other sections of this program description.

PROGRAM EVALUATION

BFP management continuously monitors and analyzes data in an effort to identify problems quickly and make appropriate adjustments. At the end of each year, a review of the previous year's accomplishments is held to celebrate successes and to identify improvements for the upcoming year. Data from the previous year are meticulously reviewed for patterns of improvement and concern. Some of the reports developed for the BFP Annual Report meeting include a 5-year comparison of routine food establishment inspections, plan review services, temporary food event and mass gathering inspections, residential day care inspections and follow-up inspections. During the annual review, individual inspector statistics are analyzed and goals for the upcoming year are introduced. Geographic areas that have overdue inspections are discussed and plans are made to bring the areas current.

Data are reviewed throughout the year to ensure the program is progressing in the reduction of the occurrence of foodborne illness risk factors. Inspection scores are evaluated to identify problems or deficient areas. Inspectors are evaluated for overall inspection scores and prevalence of low scores. Trends are evaluated and addressed.

We have conducted several major studies intended to influence policy and processes to improve program effectiveness. During 2007-2008, a study was conducted in Salt Lake County to assess the impact of focused food manager training on inspection scores. BFP also studied the association of the restaurant inspection website on critical violations and the use of announced inspections as a tool for reducing critical violations. The results of these studies have guided policy and procedures as continual progress is made toward the reduction of the occurrence of foodborne illness risk factors. BFP learned from the studies that a world-class website is a valuable tool for reducing critical violations and that announced inspections are an effective means of improving restaurant processes that involve physical facility violations. Behavioral violations are addressed through additional training. These innovative changes in processes have allowed BFP to be flexible in the way it addresses different issues in the various restaurants and the way it assesses program effectiveness.

PART III: CHALLENGES, OBJECTIVES, MEASUREMENTS AND ACHIEVEMENTS

Challenge #1:

Encourage elimination of foodborne illness risk factors by facilitating access to restaurant inspection data for the food industry and the general public.

Objective: Create a restaurant inspection web site that is meaningful to the public, educational for food service operators, and motivational for food service operators to reduce critical factors.

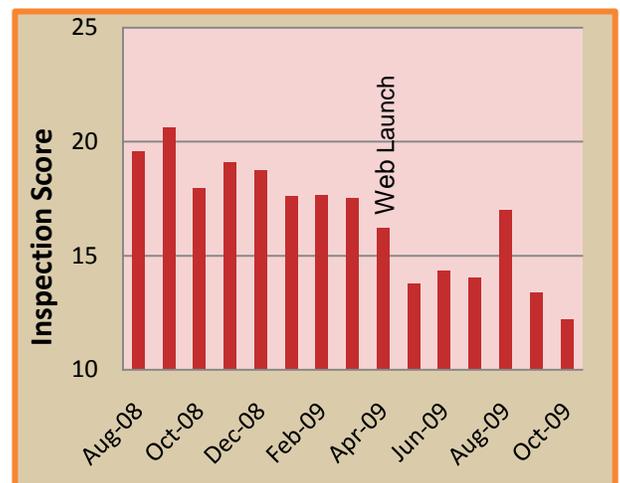
Methods: In April 2009, SLVHD made it easier for the general public to get access to restaurant inspection data by launching a [restaurant inspection website](#). The website was designed by a team in the Bureau of Food Protection who then collaborated with the Utah Restaurant Association, Utah Food Industry Association, and the Salt Lake Environmental Quality Advisory Commission for feedback. The Salt Lake County Mayor and the Executive Director of SLVHD held a press conference to announce the launch of the website (Appendix M). The site had more than 60,000 visitors at one time during the first hour and caused the server to temporarily crash. Within the first 24 hours, there were over one million hits. Although a server failure is never hoped for, it was rewarding for the Food Protection staff that designed the web site to know that the public was so interested in the information. The objective was accomplished in the following ways:

(1) *Meaningful to the public:* The inspection website offers meaningful information to the general public. It contains a multi-field search engine in which a user is able to check a restaurant's inspection score and rating, view each violation found by inspectors, the public health rationale for each violation, the actual food code verbiage for each violation, and whether or not each violation was corrected on site during the inspection. Other useful features include an inspector jargon glossary, a top ten list of most common violations in Salt Lake County, a list of current food establishment closures, links to FDA and CDC foodborne illness web pages, and a comparison function that allows a user to compare up to three restaurants side by side to see how they rate.

(2) *Educational to food service operators:* Many of the web site features available to the public also benefit food service operators. Establishment owners are able to keep track of how their establishment(s) performed on the most recent inspection, as well as on inspections dating back to January 2008. Since rankings are relative to other food establishments within a risk level, owners and managers can see how they match up to the competition. The best inspections earn a 4-Star ranking, while the poorest inspections receive a 1-Star ranking. Managers have all of the food code and public health rationale information literally at their fingertips to aid them in understanding why a violation was cited, and in training their employees to avoid practices that lead to violations. Critical violations and critical factors appear in red to highlight the most important items on which food mangers should focus.

(3) *Motivational to Food Service Operators:* Food service managers' interest in their inspection results noticeably increased after the launch of the inspection web site. Not only were their inspection scores on display, but every detail of all of their violations was readily available to everyone in the general public. Shortly after the web site went live, corporate executives of two major restaurant chains requested meetings with SLVHD so that they could become better informed about how to perform well on routine inspections.

Achievements: The heightened interest in inspection scores has ultimately led to cleaner kitchens and reduced numbers of critical factors. It has prompted food service managers to take a more active role in training their staff to control critical factors. Two methods were used to evaluate the effects of the inspection web site on critical factors: (1) a comparison of average inspection scores before and after the website launch, and (2) tracking the



frequency of critical factors before and after the launch. The comparison of average routine inspection scores from six months before the web site launch and six months after the web site launch revealed an average decrease of 4.3 points per inspection.

Challenge #2:

Excessive foodborne illness risk factors in new establishments.

At the beginning of 2005, food establishment plan reviews were all assigned to and conducted by one of three EHS. Construction inspections and pre-operational inspections for the newly-built establishments were then assigned to the various area inspectors according to the geographic area in which the food establishment was located. There was little communication between the plan reviewer and the inspectors. When deviations were made from the approved plans by the owner or builder of food establishments, the area inspector was not aware of them and could only assume that the establishment was built according to the submitted plans.

The number of plan review services requested by owners of new food establishments dramatically increased from 2006 to 2007. During this spike, BFP discovered that new food establishments were performing poorly on their first routine inspection after opening. Although establishment owners and managers had received the required food safety training, they were not applying it to all aspects of their establishment's operation. Many of them gave feedback to the EHS during first inspections that they were not sure what to expect during health department visits. They were generally unable to demonstrate knowledge of critical control points and foodborne illness critical factors within their food operations. EHS staff pointed out to BFP management that the likely cause of this knowledge gap was that plan reviews focused too much on design of physical facilities and equipment layouts, and not enough on the menu and food operations.

Objective: Re-develop the plan review program to establish continuity between the plan review phase and the pre-operational inspection phase, and broaden the focus of plan reviews to include a food operations assessment in addition to the physical facility review.

Methods: By the end of 2005, the food establishment plan review team was expanded from three to six EHS. All members of the team attended FDA plan review training, as well as in-house plan review trainings. The new team developed a "cradle to grave" approach to plan reviews in which each new or remodeled establishment was assigned to one team member who reviewed the plans, and then conducted all construction and pre-opening inspections. This new approach not only ensured that food establishments were designed properly, but that they were also constructed according to the approved design. In 2009, a new plan review application (Appendix N) was implemented that is based on the FDA model plan review application. The new application focused on critical control points, with the intent that risk factors would be controlled on the first day of operation, not after the first routine health inspection.

Achievements: During a plan review the EHS is now able to get a better picture of the entire operation and identify potential for risk factors to occur. Applicable food safety brochures are provided to food managers to be used during pre-operational trainings, and managers are directed to the [Materials for Restaurant Managers](#) page on the BFP web site for useful resources such as temperature logs, cooling logs and self-inspection forms. During pre-opening inspections, the EHS is already aware of the food processes that will be used in the food establishment, and addresses potential foodborne illness risk factors before the establishment opens. Progress was measured by tracking the yearly average scores of first routine inspections in new establishments. A lower average score would indicate that risk factors were being controlled more effectively by food managers.

In 2005, the average violation score on first routine inspections of new establishments was 18.9. In 2006, it decreased to 18.2. In 2007, the score spiked to 20.5, prompting the implementation of the new, more comprehensive application. The average scores for 2008, 2009 and 2010 were respectively 17.1, 14.2 and 15.3. The 3.6 point decrease from 2005 to 2010 indicates a small measure of success in educating about risk factors during the plan review and pre-operational phase.

Challenge #3:

Food service managers do not exercise active managerial control in establishments.

On May 1, 2005 the Deseret News, one of Salt Lake City’s major newspapers, printed an article (Appendix O) that identified the most commonly cited critical factor violations found in food establishments throughout Salt Lake County during the previous year. SLVHD completed a second analysis and found similar results, summarized in the Table 4. At the time of this news article, inspections were concluded with the EHS conducting an exit interview with the person in charge to ensure that they understood all violations, and that they had corrected as many critical factors as possible. The EHS also gave verbal education on how to prevent risk factors, but there was no visual or written information given.

Most Common Violations	Table 4	FDA Code
1. Food Contact Surfaces Clean to Sight and Touch		4-601.11
2. Hot and Cold Holding		3-501.16
3. Separation, Packaging, Segregation of Raw Animal Foods		3-302.11
4. Storage, Separation of Toxics/Chemicals		7-201.11
5. Eating, Drinking or Using Tobacco		2-401.11
6. Contamination by Employee Hands		3-301.11
7. When to Wash Hands		2-301.14
8. Chemical Sanitization		4-501.114

Objective: Produce written educational materials to distribute to the person in charge at the end of inspections. Materials needed to explain how to prevent specific critical factors in food establishments, and needed to educate food workers about the consequences of out-of-control risk factors.

Methods: In response to the newspaper article and analysis results, SLVHD staff developed educational food safety brochures for each of the eight violation categories to help food service managers to educate themselves and their employees. The brochures were printed in color and included written and visual information to aid food establishment managers in taking an active role in controlling risk factors and reducing critical violations. By the end of 2006, brochures were available in English and Spanish, and in 2007, a University of Utah intern completed translation of the brochures into Mandarin. Additional brochures continued to be created to address industry requests for more education. Newer brochures include Cooling Potentially Hazardous Foods, Food Allergies, Sushi, and Time as a Public Health Control. Brochures are frequently distributed during inspections and enforcement meetings with the intent that managers use them so that on follow-up inspections, risk factors were found to be eliminated. Brochures were made available in the BFP office and printable versions are published on the [BFP website](#).

Methods for measuring effectiveness of the brochures included the observation of trends in follow-up inspection scores over designated time periods, and tracking the correction of critical factors on follow-up inspections.

Achievements: Yearly follow-up inspection score averages are shown in Table 5:

Table 5					
Average Follow-Up Inspection Scores by Year					
2005	2006	2007	2008	2009	2010
16.48	16.43	17.59	13.95	13.56	12.48

Average follow-up scores were steady in 2005-2006, and peaked in 2007. Since the utilization of multi-lingual brochures in 2007, average follow-up scores have steadily declined. An analysis of critical factor corrections on follow-up inspections was completed for 2008 inspections. Results showed that 86% of critical factors that were identified on routine inspections had been corrected at the time of the follow-up inspection.

PART IV: PROGRAM LONGEVITY

In 2006, BFP began to hold annual meetings that are referred to as the Bureau's Annual Report. There are three main objectives to this meeting. First, inspection data, challenges and accomplishments from the previous year are presented to staff. Second, goals and priorities are discussed for the upcoming year. For example, in the meeting that took place in January, 2011 there was a lengthy discussion on the importance of finding a balance between the "quantitative" and "qualitative" aspects of conducting regulatory inspections. At the end of the discussion, the group came to the realization that a better balance of both aspects are essential to promoting public health by helping to minimize the occurrence of foodborne illness. Finally, this annual meeting is an excellent team-building exercise and it has helped renew BFP's focus, on both an individual and collective level for the upcoming year.

BFP is part of the Environmental Health Division's goal to be a community leader in the pursuit of environmental sustainability. In 2011, BFP partnered with students in the Master of Public Health Program at the University of Utah who are enrolled in a public health planning course. The purpose of this course is to teach students how to effectively develop, implement and evaluate a public health project. One of BFP's staff who was also enrolled in the MPH program decided to focus her project on two sustainable practices in restaurants: cleaning refrigerator coils; and only providing glasses of water upon request. Once her pilot program has been field tested and the resulting data analyzed, it will be incorporated into our routine inspection program. The intent is to identify other ways that food establishment operators can make their operations more environmentally sustainable while improving public health. Programs will then be developed to help operators accomplish these goals. An exciting aspect of this program is that food establishments that implement these changes will receive the designation of a *Salt Lake County Green Business*. This will allow them to post a *Salt Lake County Green Decal* in their window and be listed on Salt Lake County's *Green Business Website*.

For the past few years there has been an ongoing outbreak of *Salmonella* Newport in Salt Lake County. In June of 2011, BFP with the help of a criminal investigator from the Salt Lake County District Attorney's Office, and, in collaboration with other agencies such as the Utah Department of Health and the Utah Department of Agriculture and Food identified an illegal processor who was manufacturing Queso Fresco in his home and selling it to restaurants. He was identified in a photo lineup by the owner of a restaurant to which he had sold illegal cheese. A sample of this cheese was DNA-matched in the lab to the *Salmonella* Newport that had been implicated in the outbreak. BFP's collaborative effort with other agencies mitigated this public health hazard.

In 2011, BFP began developing an award certificate for recognizing the highest-performing food service establishments annually in each of the four inspection risk levels. Award criteria include: no critical violations; all managers possess current food manager certification; all line staff possess a current food handler certification. The restaurants must achieve 100% compliance with these criteria for several consecutive routine inspections. This initiative has garnered strong support from industry, namely the Utah Restaurant Association. It will be awarded on an annual basis beginning in 2013.

During 2011, BFP's Health Regulation #5 was amended to include progressive enforcement language. This was necessary to reduce the public health risk created by facilities such as food carts that had been closed repeatedly due to imminent public health hazards. It is referred to as the "Three Strike Rule" and has already resulted in fewer imminent hazard closures as food service operators have been made aware of it. The following language is taken directly from the regulation:

Receipt of the first permit suspension shall result in suspension of food service operations until the Department has verified that identified violations of this regulation have been corrected. Receipt of a second permit suspension shall result in suspension of food service operations for a period of a minimum of seven days. Receipt of a third permit suspension may result in the food establishment permit being revoked. The owner of the said establishment may be restricted from operating a food establishment for a minimum of 180 days, at which time the owner may be required to make application and submit a plan review etc., as if the establishment was a new establishment. Additional requirements may be required by the Department for approval of the establishment to operate.

PART V: CONTACT INFORMATION AND PERMISSION

Contact Information:

Bryce C. Larsen, M.P.A., L.E.H.S.
Manager, Bureau of Food Protection
Salt Lake Valley Health Department
788 East Woodoak Lane
Murray, UT 84107

Phone: 385-468-3824
Email: blarsen@slco.org

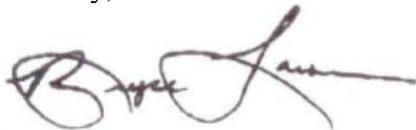
Permission to place on web:

March 8, 2012

To Whom It May Concern:

The Salt Lake Valley Health Department gives permission to the Food Service Packaging Institute to place this 2012 Samuel J. Crumbine Award Application on www.fpi.org.

Cordially,



Bryce C. Larsen, M.P.A., L.E.H.S.
Manager, Bureau of Food Protection
Salt Lake Valley Health Department
788 East Woodoak Lane
Murray, UT 84107