June 28, 2007

Dr. Mark B. Horton, State Public Health Officer

Department of Health Services

MS 0028

Food and Drug Branch

P.O. Box 997413

Sacramento CA 95899-7413

Reference: E. coli Outbreaks in Washington State, San Mateo and San Diego Traced to

Monterey County Produce

Subject: Report to the State Health Officer Regarding the Investigative and Remedial

Actions of Monterey County in Response to the Referenced Outbreaks

Action Report of the Monterey County Health Department

The Monterey County Health Department is mandated by the State Health & Safety Code to regulate all retail food establishments in Monterey County. This includes: restaurants, markets, bakeries, catering trucks and any other facility that prepares or serves food to the public.

The responsibility for regulating food in California, from the farm through wholesale distribution, is the combined responsibility of the California Department of Health Services (CDHS), the California Department of Food and Agriculture (CDFA), the United States Food

& Drug Administration (FDA) and the United States Department of Agriculture (USDA).

On March 25, 2004, DHS Food and Drug Branch held a meeting in Monterey County regarding documented food borne outbreaks of Escherichia coli O157:H7 in San Diego, San Mateo (2003), Orange County California, and Washington State (2002). Representatives from the Monterey County Health Department, Regional Water Quality Control Board, Monterey County Water Resources, US Department of Food and Drug, and the Monterey County Agricultural Commissioners office were present.

DHS spokesperson, Dr. Jeff Farrar, provided investigative data indicating that Salinas Valley produce had been implicated in E. coli outbreaks both in California and other states. DHS staff’s subsequent investigation pinpointed several suspect locations where the implicated produce may have originated from within the County of Monterey.

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In response to the May 3, 2004 DHS investigative report, staff from Monterey County Health Department’s Environmental Health Division (EHD) in cooperation with DHS staff conducted several creek surveys to locate, identify and attempt to eliminate sources of potential surface water contamination. The surveys included the Santa Rita and Gabilan Creeks.

The Santa Rita Creek survey team consisted of specialists from EHD’s Consumer Health Protection Services, Hazardous Materials Management Services, Solid Waste Services, and Water Protection Services. Staff conducted the survey by foot along approximately seven miles of the Santa Rita Creek and obtained photographs of potential contamination sources existing in the Creek and at adjacent property sites. Multiple water samples were obtained and sent to the Monterey County laboratory for analysis and data was provided to DHS.

The Monterey County Planning and Building Inspection Department (PBI) Code Enforcement staff assisted the Health Department in a second survey of the watercourses in late April. Inspectors of PBI noted areas along the Creek exhibiting signs of serious run-off erosion. PBI staff speculated that the practice of planting row crops perpendicular to the Creek could cause excessive amounts of runoff to enter the Creek from either irrigation or rainfall.

Water samples obtained by EHD staff April 6-7, 2004 were analyzed for Organophosphorus Compounds, Organochlorine Pesticides, Chlorinated Herbicides, Coliform; Fecal, E. coli, and E. coli O157:H7. Laboratory reports indicated that trace amounts of Organochlorine pesticide [4,4-DDD (0.78 ppb); 4,4-DDT (0.52 ppb); Endosulfan sulfate (0.33 ppb)] and Organophosphorus pesticides [Diazinon (7.9 ppb)] were detected adjacent to the Chinn Ranch north west of Salinas and bordering the Santa Rita Creek. These compounds were not detected at nine other locations sampled along the watercourses. E. coli O157:H7 was not detected in any of the samples taken, however generic E. coli, fecal and total Coliforms were detected in samples taken at multiple sampling sites.

Approximately twenty parcels along the seven miles of the Santa Rita Creek, upstream from the Chinn Ranch, were found to be in violation of the Monterey County Code 10.41.020 (Unlawful accumulation of solid waste). Violations varied from horse, cattle, and sheep wading in creeks, accumulation of animal waste, agricultural debris scattered in close proximity to and in the creek beds, to pipes discharging surface water from private residences. Property owners, found to be in violation of the Monterey County Code and/or other California State regulations, were sent a letter indicating that a full inspection of the property would be conducted by EHD. The property owners were given a reasonable amount of time to make the necessary corrections. Follow-up inspections confirmed that compliance had been attained without additional enforcement action.

In June of 2004, Monterey County EHD was asked to participate in an Environmental Sampling Project (ESP) coordinated by DHS. Other participants included staff from USDA, FDA, DHS, UC Davis, WIFSS, and the USDA Wildlife Service. The EHD was tasked to collect and analyze well samples from the Chinn Ranch on a monthly basis.

The sampling project continued into April of 2005. A draft of the Environmental Sampling Project report was presented by DHS to Monterey County agency staff. Those in attendance included representatives of the Monterey County Water Resources Agency, Agricultural Commissioner’s Office and the Environmental Health Division.

In late 2005 EHD staff attended a meeting at the Monterey County Growers and Shippers Association where DHS presented their findings to the local farming industry. During this meeting EHD advised those in attendance that monitoring of the creeks would continue. At this meeting, discussions were held with Mr. Christopher Rose of the Central Coast Regional Water Quality Control Board (CCRWQCB) to discuss future cooperative efforts to monitor local watercourses.

In January 2006, Mr. Rose of the CCRWQCB was asked by EHD to make a presentation of the Regional Boards investigative findings to Monterey County’s Code Enforcement and Erosion control staff. The purpose of the meeting was to coordinate joint creek surveys between the Health Department and other agencies. It was at this meeting that Mr. Rose identified sample locations where water analysis indicated that Escherichia coli O157:H7 was present at sites other than Santa Rita Creek. This appeared to be evidence that the issue of potential sources of contamination were more widespread than previously identified.

Based on this information, EHD staff consulted with Mr. Rose to define areas in which each agency would concentrate their investigations to eliminate duplicative investigative activities. The CCRWQCB agreed to concentrate their investigation at the Salinas River and its tributaries, and EHD would conduct its investigation at Santa Rita Creek, Gabilan Creek, and any accessible tributaries suspected of contributing to surface water contamination.

EHD and DHS staffs conducted a May 9, 2006 survey/investigation. The goal of the investigation was to identify potential sources of contamination in and along the Santa Rita and Gabilan Creeks. EHD also agreed to assist DHS investigative staff in obtaining access to properties along all watercourses identified for sampling. The objective of DHS was to obtain soil, water or animal fecal samples on properties adjacent to creeks suspected of contributing to run-off contamination.

The May 9, 2006, creek surveyors followed the Santa Rita Creek for approximately one mile between residential parcels in Salinas, California. Very few areas along the creek were impacted with solid waste materials. However, two parcels did contain waste tires, solid waste, including a mattress. Additionally, a few of the residential parcels showed signs of grey water drainage (i.e. metal piping extending to the creek). Along the survey route domestic animals were observed, such as horses, cattle, pigs, and sheep. At these locations, field samples of water and fecal materials were collected for laboratory analysis by DHS.

Although DHS has not formally published the results of these surveys to date, DHS staff did indicate to EHD staff that the laboratory results showed a widespread Escherichia coli O157:H7 contamination at many of the sampling sites.

During the investigation into the cause of these outbreaks, Monterey County Health Department staff worked very closely with DHS staff. To the best of my knowledge, all supporting documentation relating to Monterey County’s involvement during the course of the investigation is in the possession of DHS.

Monterey County Health Department Initiatives

To assist the efforts of Federal and State authorities in the effort to protect the safety and integrity of produce grown and processed in Monterey County. The Monterey County Health Department, Environmental Health Division has implemented, is implementing or is planning to implement a number of food protection initiatives:

 Assist DHS staff, as they may request for investigation and surveys.

 Partner with California Integrated Waste Management Board (CIWMB) staff to review current manure composting, sampling and inspection procedures. EHD program staff will increase the inspection frequency of all compost facilities adjacent to watercourses. Current regulations under Title 14, Section 17855 (1,4), California Code of Regulations exempts composting operations that are in “agricultural settings and handles agricultural material derived from an agricultural site, and returns a similar amount of the material produced to that same agricultural site”. This exemption enables small scale composting operations to operate on farmland without regulation in the state of California. However, given the current public health crisis, the EHD will include these exempt farm-composting operations in an enhanced inspection program utilizing Monterey County Code Chapter 15.22, Discharge of Contaminants into Waters of the County. These exempt composting operations are numerous and widespread, and their locations are largely unknown to the EHD at this time.

 Implement a field toilet registration and inspection program to focus on hand washing facilities and the availability and proximity of field toilets to all farm workers in all agricultural settings. The EHD would follow the recommendations outlined in the October 26, 1998 Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables, specifically sections IV (Worker Health and Hygiene) and V (Sanitary Facilities). With appropriate staffing support, full implementation of this program could be completed by July 2007. In the interim, EHD staff will work on educating farm labor contractors and farm operations on the new program requirements and recommend early implementation.

 Continue to implement the Liquid Waste Vehicle Inspection program and coordinate with the Field Toilet inspection program. Coordination of the two programs will ensure that all liquid and solid waste generated in agricultural settings is properly handled and disposed at approved facilities.

 Establish a Protocol for Response to Sewage Spills in Agricultural Fields. The existing EHD sewage spill response policy still generally applies to all sewage spills. This protocol is intended to protect food crops from sewage contamination and prevent crops that have been contaminated from being used for either human or animal consumption.

 Continue enforcement of existing Onsite Wastewater Treatment Systems (OWTS) programs per the Monterey County Code Chapter 15.20, with special emphasis on those systems that may adversely impact food safety. The EHD is designated as the regulatory agency for disposal of domestic waste of less than 2500 gallons per day by the RWQCB. This ordinance and the regulatory oversight must maintain conformance with the Basin Plan for the Central Coast Regional Board. EHD issues permits for the construction, destruction and repair of OWTS. For example, the installation of all septic systems must be no less than 100 feet from surface water and water wells. EHD responds to all complaints of OWTS failures that are reported. Although, EHD staff observed no OWTS failures during any of the previous creek survey/inspections, a proactive survey program is required to assure that OWTS are not a contributing source of the contamination of produce in the field.

 Continue to promote and facilitate interagency communication and coordination in all food borne illness outbreaks. Communication protocols for DHS and EHD should be observed by all agencies as outlined in the February 2001 Multistate Foodborne Outbreak Investigations, Guidelines for Improving Coordination and Communication prepared by the National Food Safety Project Outbreak Coordination and Investigation Workgroup.

 Implement when adopted the Health Department’s elements of the storm water management phase II plan that include Best Management Practices for stormwater discharges. The Monterey Regional Storm Water Management Program (MRSWMP) includes the cities of Monterey, Pacific Grove, Seaside, Sand City, Marina, Del Rey Oaks and the County of Monterey. The MRSWMP will help to eliminate or reduce impacts from wastewater discharges into creeks and streams running through cities and urbanized areas that may contaminate agricultural fields downstream.

 Continually re-evaluate the priorities of ongoing programs and will assist DHS in surveillance through the existing mandated programs in retail food safety, CUPA (HAZMAT), onsite wastewater treatment systems, solid waste (composting), and the drinking water protection program.

Summary

Monterey County Health Department, Environmental Health Division staff, in partnership with the Monterey County Water Resources Agency and the County Agricultural Commissioner’s Office, continues to conduct routine environmental monitoring and provide timely responses to any complaints regarding alleged contamination of soil and water.

It should be pointed out that although the Environmental Health Division is able to absorb and sustain high intensity surveillance workload during agricultural related foodborne illness outbreaks, the Division can only do so for short durations before jeopardizing its ability to carry out other mandated public health protection programs. Strategies to augment staffing for the Division’s Consumer Health Protection, Onsite Wastewater Treatment Systems, and Composting Inspection Programs are currently being explored. The identification of an appropriate and sustainable revenue stream will be essential for any future expansion of service levels.

If you wish any specific additional information or any updates regarding the ongoing activities of the Division in our local efforts to prevent future E. coli O157:H7 outbreaks, please contact me at (831) 775-4539 or e-mail me at strohaj@co.monterey.ca.us.

Sincerely,

*John Ramirez for Allen Stroh*

Allen J. Stroh, REHS, MPA Director of Environmental Health Monterey County Health Department

c: Jeff Farrar, Chief, DHS Food & Drug Branch

Len Foster, Director of Health, Monterey County Health Department

Hugh Stallworth, MD, MPH, Health Officer, Monterey County Health Department

Eric Lauritzen, Monterey County Agricultural Commissioner

Curtis Weeks, General Manager, Monterey County Water Resources Agency

Attachments:

Solid Waste Management Services E. coli Mitigation Measures and Improved

Composting Facility Protocol

Agricultural Field Toilet Inspection Program booklet Agricultural Field Toilet Inspection Program Application Agricultural Field Toilet Inspection form

Liquid Waste Hauler Registration Program, Standard Operating Procedures

Liquid Waste Hauler Registration Application

Liquid Waste Vehicle Program, Vehicle Requirements Non Hazardous Liquid Waste Vehicle Inspection form Protocol for Response to Sewage Spills in Agricultural Fields