



# Safe Water & Ice, Food & Beverage Handling at Golf Courses in Maricopa County

**Plan Review & Construction Program**  
Environmental Services Division | Permitting Services  
Maricopa County Environmental Services Department

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## Maricopa County Environmental Services Department (MCESD)

*"Working with our community to  
ensure a safe and healthy environment"*

**VISION STATEMENT:**

As the recognized regional environmental leader, we will develop and foster innovative environmental health protection programs for the safety of our residents and their environment.

**MISSION STATEMENT:**

The mission of the Environmental Services Department is to provide safe food, water, waste disposal and vector borne disease reduction controls to the people of Maricopa County so that they may enjoy living in a healthy and safe community.

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## Introduction

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*Plan Review Today for Success Tomorrow!*

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## Plan Review & Construction Program

- (2) Supervisors and (11) staff
- 4<sup>th</sup> Most populous county in the U.S.
- Responsible for permitting new construction, new owners, issuing additional permits, and remodeling
- Conduct HACCP and variance review
- Provide technical and professional expertise, as well as related training to the Department and customers
- Provide plan review related, plumbing, backflow prevention, and variance guidelines, including educational handouts
- Staff are experienced inspectors who are considered subject matter experts in their field
- Staff reviewed 3692 permit applications in fiscal year 2015




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## Overview



Background & History

Inspection Areas

Guidance

Recommendations

Resources




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## Background and History

### Water & Ice



#### Coroner confirms virus that killed golfer, 15

Virus caused death of teen

By Carol Sowers  
The Arizona Republic  
Nov. 5, 2012



SOUTH PHOENIX - The Maricopa County Medical Examiner's Office has confirmed that a 15-year-old golfer died after contracting the Norwalk virus that sickened 82 other golfers during a tournament at the ██████████ Course.

Dr. Kevin Horn said in his report that even though the flu-like virus was not found in earlier tissue testing of Nils Beeman, the autopsy points "convincingly toward a diagnosis of acute Norwalk gastroenteritis as the underlying cause of death."

The Altamonte Foothills teen, who choked to death on his own vomit, was found dead in his parents' bathroom on July 19 after participating for several days in a golf tournament at ██████████

Officials believe the virus was spread through contaminated water and ice in the golf course's coolers. The teen's death triggered widespread changes in the way golf courses handle water.

The ██████████ course is owned in part by a family trust and a limited liability corporation controlled by the ██████████ which also sponsors the ██████████

██████████, a Phoenix lawyer who represents the Beeman family, said Monday's confirmation "puts the responsibility for the death right at their doorstep." He said the family is considering a lawsuit.

██████████ the organization is saddened by the teen's death.

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## Background & History



### *The Suspected Cause of the Norovirus Outbreak*

Substandard water and ice handling practices.

Communal jugs of water were not properly cleaned and sanitized.

Ice-making facilities were uncovered and employees filled containers with water and ice using their bare hands with limited access to adequate handwashing facilities.

Patrons reached into communal jugs with bare hands or drinking cups to obtain ice.

The reverse osmosis filtration process removed chlorine from the water making it more susceptible to pathogenic contamination.

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## Background & History



### *Corrections and Results*

The golf course staff immediately began serving only bottled water chilled in commercially produced ice.

No new illnesses were reported.

Within two weeks following the incidents 160 Phoenix golf courses were surveyed and inspected by the Department to evaluate their water and ice production and service.

Greater than 60% of water and ice dispensing at all golf courses was conducted in an unapproved manner.

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## Background & History



### *MCESD Inspections*

Every golf course premises with Maricopa County was surveyed and inspected by MCESD health inspectors.

Clubhouses, restaurants, concessions, greens, food & beverage carts, hydration stations, golf carts, service bays, and maintenance areas were evaluated.

Health inspectors ceased all other duties in order to complete these golf course surveys and inspections.

MCESD conducts annual surveys and inspections of golf course premises.

Recent training was provided to inspectors and supervisors in the fall of 2015. Inspectors will be conducting annual surveys of golf course premises.

Common Goal – Working together to ensure operations are safe & healthy!

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## Inspection Areas

### Self-Assessment Questions?



- Do we provide water/ice, food & beverage services out on the course?
- Are water and ice obtained from approved potable water sources?
- Do we have adequate restroom facilities on the premises?
- Do we provide hydration stations or drinking fountains on the course?
- Where and how do we fill the water dispensers?
- Where and how do we dispense ice?
- Who is in responsible for filling the water stations with water and ice? (Food & beverage staff, golf pro staff, maintenance staff?)

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## Inspection Areas Cont.

### Self-Assessment Questions?



- Where do we store the clean water dispensers?
- Are the water dispensers secured/locked during use?
- Are the hydration stations properly protected from contamination?
- Are portable water containers (i.e. Igloo type containers) left on the course overnight?
- How do we distribute food and beverage? Restaurant/café, concession, outdoor cooking, catering, golf cart service?
- Where do we store food and beverage?
- Do we have trained staff, written procedures, and ensure active managerial control?

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## Possible Findings



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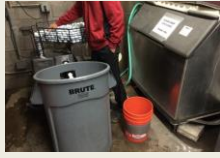
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### Possible Findings



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### Possible Findings



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### Possible Findings



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## Potable Water System



Potable water sources on the premises?

Reclaimed water or irrigation? Water shall not be consumed from these sources!

Check for cross-connections and ensure adequate backflow prevention is provided.

Ensure proper water & ice handling.

Provide approved materials and equipment.

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## Water & Ice Supply



Water and ice shall be provided from approved and protected potable sources and equipment.

Filling of water containers/dispensers shall be through the use of approved plumbing, sinks, hoses, and materials.

Provide proper storage for all hoses & containers.

Maintain in good repair, clean, sanitized.



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## Hydration Stations



Protected potable water & ice supply source?

Cross-connections on the water supply lines?

Adequate backflow prevention assemblies provided?

Protected from sprinkler system and environmental contaminants?



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### Hydration Stations

*Stations secure? Tamper proof?*



Water cooler elevated off the ground?  
Protected from irrigation/sprinkler systems?

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### Ice Machines

*For human consumption or cooling?*



- Approved handwashing facilities?
- Approved ice machine and dispensing equipment?
- Ice machine protected in an approved, protected location?
- Frequently cleaned and sanitized?
- Proper signage?

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### Ice Machines

*Properly labeled?*



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**WARNING!**  
ICE IS NOT FOR HUMAN CONSUMPTION!

**REMEMBER!**  
Ice used to keep food and beverage cool is not safe for human consumption.  
Ice used for injuries or sports medicine is not safe for human consumption.  
Ice production for other purposes may not be safe for human consumption.

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### Ice Machines

*Location? Approved service/production area?*

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### Service on Golf Course

- Staff handling water and ice on the golf course might not be a trained food handler.
- The hydration stations are not always be monitored.
- Consider outdoor and environmental elements.
- “Not for Human Consumption” shall be labeled on the golf cart cooler. The ice is only for cooling canned/bottled beverages.
- Reusable equipment (i.e. coolers, scoops) shall meet standards for food contact surfaces and shall be washed, rinsed, and sanitized accordingly.
- Are food and beverage products provided from golf service carts in an approved manner?

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### Cart Service

Is ice being scooped out on the course?



Ice provided for drinks shall be provided in clean, pre-portioned, single service "Ziploc" type bags, or in clean, single service cups with lids. The scooping of ice is not permitted from carts.

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### Ice Coolers on Carts

Labeling



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### General Transportation of Water & Ice



Water and ice shall be transported in approved, sanitary, closed containers.

Protected from the elements – Dust, wind, leaves, rain, etc.

Animals - Primarily birds, insects, rodents.

Cross-contamination – Other items on the golf cart, fertilizer, herbicides, etc.

Tampering – Unattended cart.



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## Guidance Summary



- Are water and ice production taking place in approved, secure locations or where other golf course operations are may be occurring? (i.e. Golf cart maintenance bay, golf ball washing area, maintenance building)
- Are water and ice being produced/ dispensed from a permitted location on the premises? (i.e. Restaurant, café, concession stand or or retail food establishment)
- Are ice machines located outside or in possible cross-contamination areas?
- Do we conduct outdoor food operations? (i.e. Grilling of hot dogs and hamburgers)
- Are all food and beverage operations on the premises under permit by MCESD?
- An operation may require a permit. When in doubt please ask.

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## Guidance Summary Cont.



- Water & Ice Sources:
  - Approved Potable Drinking System Water Source?
  - Ice Production Location?
- Backflow and Cross-Connection Prevention:
  - Backflow Prevention Assemblies Where Required?
  - Preventing Cross-Connections?
- Approved machines, equipment, materials for hoses and pipes:
  - NSF or Similar Approved Materials?
  - NAMA Approved Ice Machines for Outdoor Use?

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## Guidance – MCESD Code References



- Handwashing
  - 5-204.11 – Handwashing Sinks – Location and Placement
  - 6-301.11 – Handwashing Cleanser, Availability
  - 6-301.12 – Hand Drying Provision
- Handwashing Requirements:
  - 2-301.11 – Clean condition – Hands and Arms
  - 2-301.14 – When to Wash
- Food Protection:
  - 3-303.11 – Ice Used as Exterior Coolant, Prohibited as Ingredient
  - 3-305.11 – Food Storage, Prohibited Areas
  - 3-305.14 – Food Preparation
  - 3-307.11 – Miscellaneous Sources of Contamination

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### Guidance – MCESD Code References

- Preventing Chemical Contamination:
  - 7-201.11 – Separation & Storage
- Protection of Equipment and Single Service Items
  - 4-903.11(A) and (C) – Equipment, Utensils, Linens and Single-Service and Single-Use Articles- Storing
  - 4-903.12 - Utensils, Equipment and Linens, Prohibitions
- Other Provisions of the Maricopa County Environmental Health Code
  - Chapter 1 – General Provisions
  - Chapter 2 – Sewage and Waste etc.

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### Operational Recommendations

Provide hand wash stations and/or sanitizer bottles, or wipes for guests and staff while on the golf course.

Guests/staff should wash their hands prior to eating and drinking while on the course.

All guests/staff should wash their hands after leaving the golf course.

There are other opportunities for individuals to get ill from a golf course besides improper water/ice, food & beverage handling. (i.e. Fertilizers, herbicides, pesticides, contaminated surface water, bird and animal urine/feces, viruses and bacteria on golf equipment and carts.)

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### Guidance Resources

Plan Review & Construction Program Resources  
<http://www.maricopa.gov/EnvSvc/EnvHealth/PlanReview/FoodOperatorResources.aspx>

MCESD Guidance on Hydration  
[http://spenv.plandev.maricopa.gov/Environmental\\_Health/Forms%20Folder/Hydration%20Guidance.pdf](http://spenv.plandev.maricopa.gov/Environmental_Health/Forms%20Folder/Hydration%20Guidance.pdf)

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## QUESTIONS?



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**Cactus & Pine Arizona GCSA**  
**2016 Regulatory Update Seminar**  
*Thursday March 3, 2016*  
*McDowell Mountain GC*  
*12690 Sheena Drive*  
*Scottsdale, Arizona 85255*

**Presenter – Daenon Brewer**



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