

Analysis of Regulatory Inspection Data to Identify Common Deficiencies



Background:

- Virginia leads the nation in aquaculture clam and East Coast oyster production.
- Ensuring safe shellfish handling is critical since shellfish are often consumed raw, increasing risk of illness.
- The VDH regulates wholesale shellfish facilities to ensure compliance with temperature, traceability, and sanitation.
- Using digital inspection data from the EHD database, the project identified the most common deficiencies found during inspections conducted over the course of one year.
- This project is critical due to its identification of the most common shellfish safety deficiencies, allowing the VDH to target problem areas, reduce repeat violations, and strengthen foodborne illness prevention across Virginia's high volume shellfish industry.

Challenges:

- Technical problems that occur in the EHD system.
- Improperly coded deficiencies.
- Human error when entering data in Excel.

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Methods:

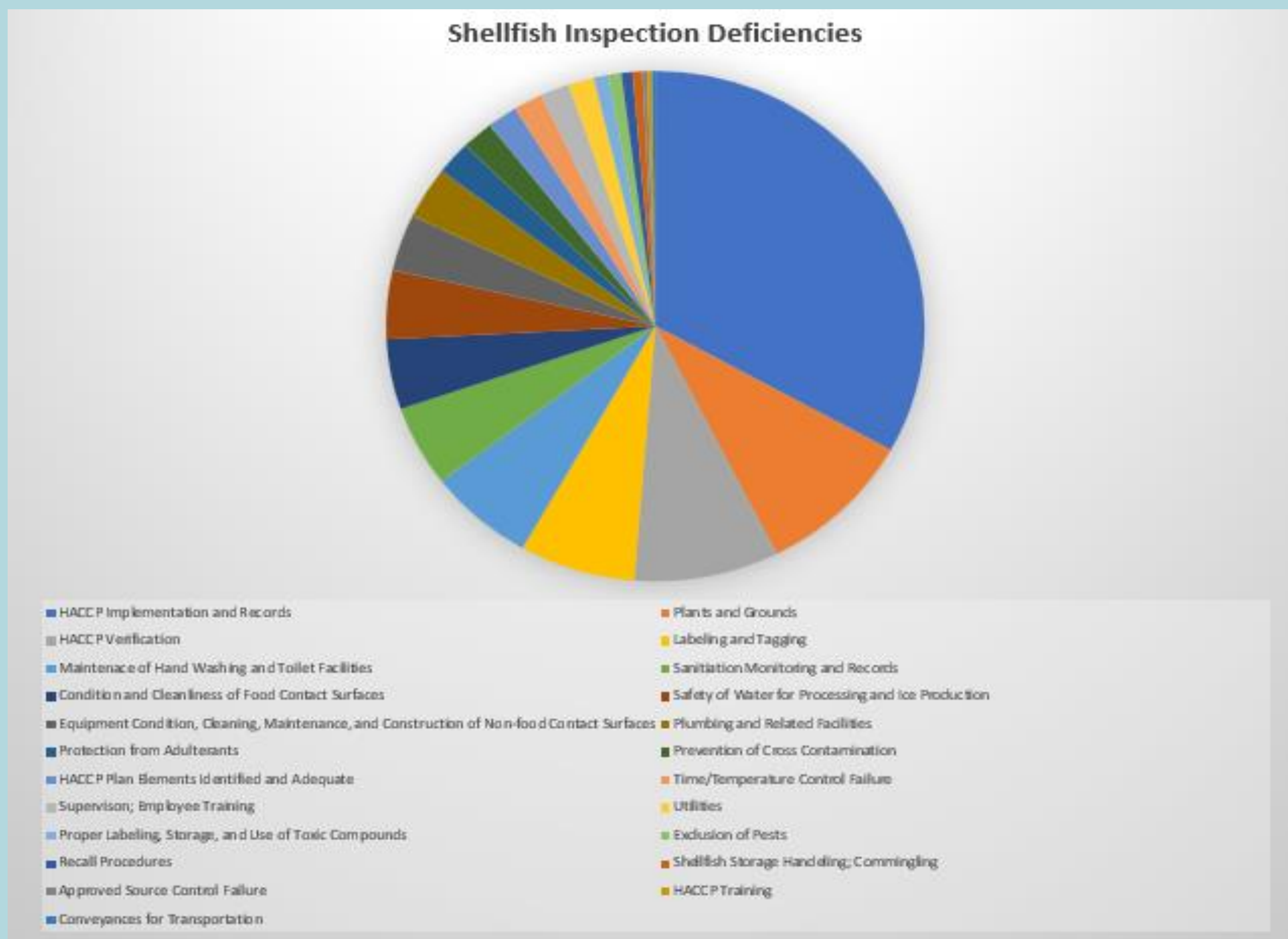
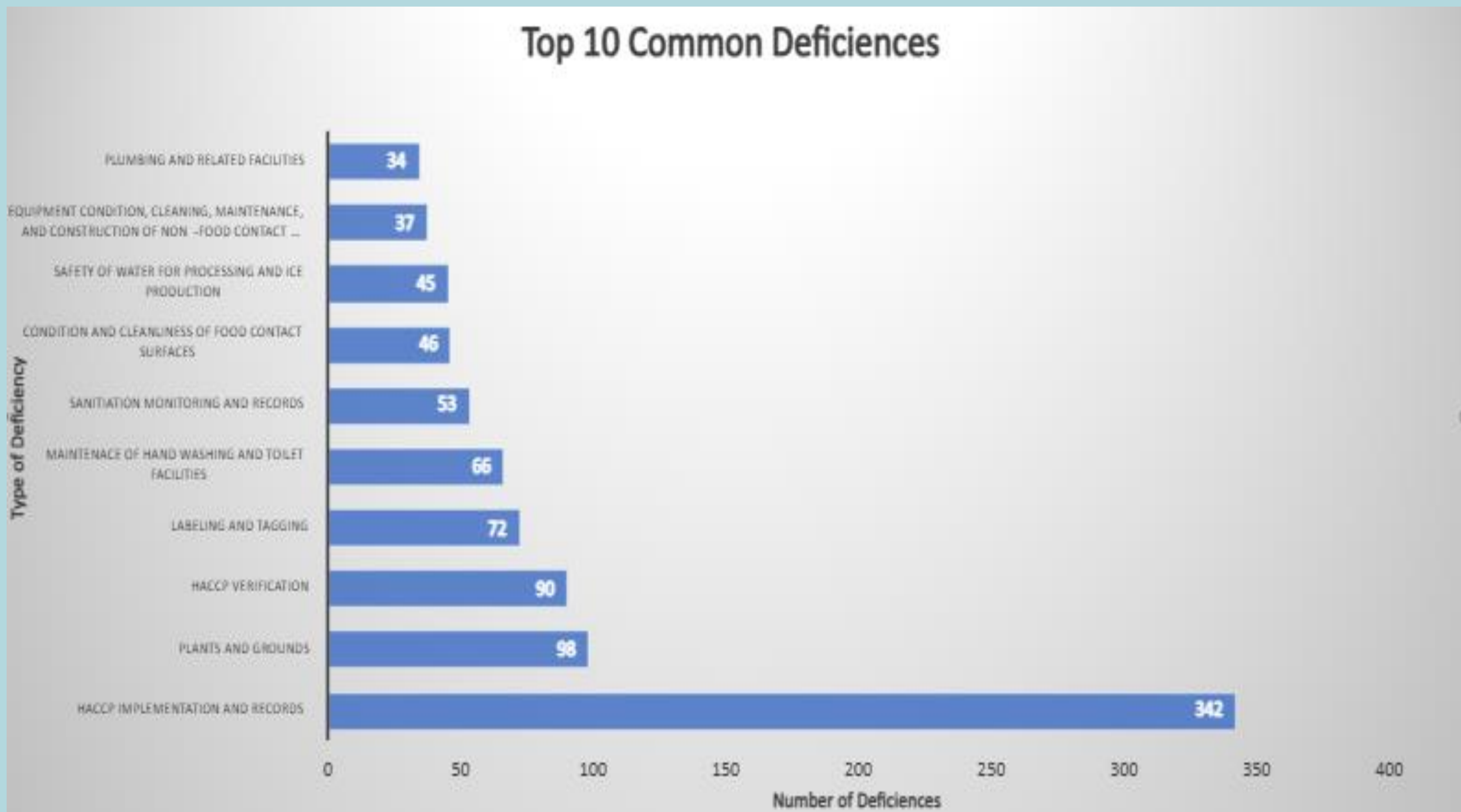
- Created a website (scan QR code) demonstrating the 27 item numbers and the most common model ordinance sections violated.
- Used EHD database to comb through 668 inspections and 222 location sites, there was a total of 1,034 infractions.
- Utilized Excel to compare and organize the top deficiencies as ranked below.
- Developed graphs using Excel to visualize each deficiency and compare them to each other.
- Generated multiple different handouts to inform the public on a select few deficiencies, why they matter, their importance, and what we can do to help minimize the infraction.



Outputs:

The top 10 most common deficiencies in shellfish safety inspections:

1. HACCP Implementation and Records
2. Plants and Grounds
3. HACCP Verification
4. Labeling and Tagging
5. Maintenance of Hand Washing and Toilet Facilities
6. Sanitation Monitoring and Records
7. Condition and Cleanliness of Food Contact Surfaces
8. Safety of Water for Processing and Ice Production
9. Equipment Condition, Cleaning, Maintenance, and Construction of Non-food Contact Surfaces
10. Plumbing and Related Facilities



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