**Chapter 9**

Floors, walls, and ceilings

* Choose material that is smooth and durable
* Floors should have coving (a curved, sealed edge between wall and floor
  + Gets rid of sharp corners or gaps that are hard to clean
  + Protects from moisture   
    Equipment
* Equipment must meet certain standards if it will encounter food
* NSF International creates these national standards
  + NSF is accredited by the American National Standards Institute (ANSI)
* Standards require it to be nonabsorbent, smooth, and corrosion resistant
* Must be easy to clean, durable, and resistant to damage

Installing and maintaining equipment

* Stationary equipment should be easy to clean and easy to clean around
* Floor mounted equipment should be at least 6 inches off the ground or sealed to a masonry base
* Tabletop equipment should be on legs at least 4 inches high or sealed to countertop

Dishwashing machines

* Installed so that they are reachable and conveniently located
* Keep food, utensils, etc.…from becoming contaminated
* Use detergents and sanitizers approved by local regulatory authority
* Should have the following measurement abilities: water temp, water pressure, and cleaning and sanitizing chemical concentration   
  Handwashing stations
* Put in areas that make it easy for staff to wash their hands often
* Required in restrooms or directly next to them in areas of food prep, service, and dishwashing
* Can only be used for handwashing
* Water must be drinkable and meet temp and pressure requirements
* Soap can be liquid, bar, or powder
* Must include a way to dry hands and a garbage container if using single use paper towels
* Post signage to indicate employees must wash hands before returning to work

Utilities and building systems

* Utilities= water, electricity, gas, sewage, and garbage disposal
* Building systems= plumbing, lighting, and ventilation
* The greatest challenge to water safety comes from cross-connections
  + This is a physical link between safe water and dirty water, which can come from drains, sewers, or other wastewater sources
  + Backsiphonage- When high water use in one area of operation creates a vacuum in the plumbing system that sucks contaminants back into the water supply
  + The best way to prevent backflow is to avoid creating a cross-connection
    - Do not attach a house to a faucet unless a backflow prevention device is attached, such as a vacuum breakfast (it closes the check valve and seals the water supply line shut when water flow is stopped)
    - Other backflow prevention devices include double check valves and reduced pressure zone backflow preventers
    - An air gap is the only sure way to prevent backflow
      * It is an air space that separates a water supply outlet from a potentially contaminated source
      * A sink has 2 air gaps: ne between faucet and floor rim of sink and another down below between the drainpipe and the floor drain
* Buildup of grease is a common problem in plumbing systems
  + Grease traps prevent grease buildup from blocking the drain. They must be cleaned regularly to prevent dirty water from backing up.
* Lighting
  + Lighting intensity is measured in units called foot candles or lux
  + Different areas of the facility have different lighting intensity requirements
  + Lights should have shatter resistant lightbulbs or protective covers
* Ventilation improves the air inside an operation
  + Remove heat, steam, and smoke from cooking lines. It also eliminates fumes and odors.
  + If not working correctly, grease and condensation will build up on walls and ceilings
* Emergencies that affect the facility
  + Most common emergencies include electrical power outages, fire, flooding, and sewage backups (these are imminent health hazards)

Temp control, physical security, and drinkable water supply should also be considered an emergency

Pest management

* Prevention: deny access to operation, deny food/water/shelter, and work with a licensed pest control operator

Most important food safety features to look for when selecting flooring, wall, and ceiling materials=smooth and durable

The surface underneath a dumpster should be paved with concrete or asphalt, not gravel. Drain plugs should be in place.