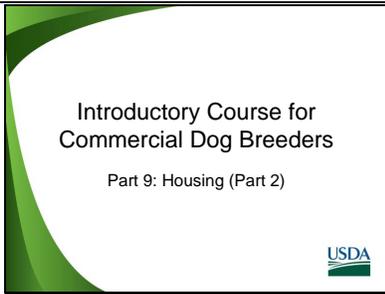


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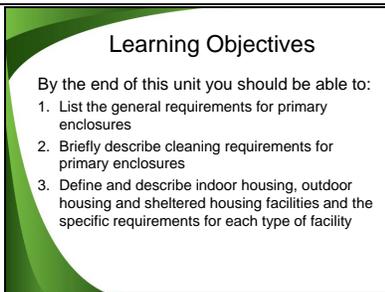


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The housing provided to dogs at commercial facilities is important to their overall health and well-being. The Animal Welfare Act (AWA) standards and regulations provide detailed information on housing standards for licensed facilities. It is important to understand the regulations and make sure your facilities meet the standards established by the regulations. This course divides the topic of housing into two parts. Part One provides a general description of the types of facilities and the general structural, maintenance and other requirements applicable to all types of facilities. Part Two describes specific requirements for primary enclosures and each type of housing facility. Be sure to refer to the regulations or ask your Inspector if you have any questions about housing.

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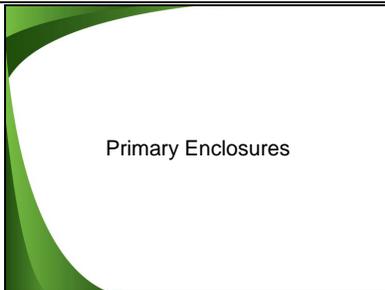


This presentation will describe the different types of housing facilities and the Animal Welfare Act standards that apply to them.

By the end of this unit you should be able to:

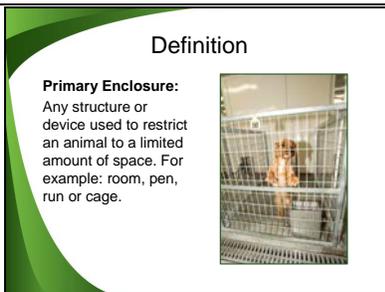
1. List the general requirements for primary enclosures
2. Briefly describe cleaning requirements for primary enclosures
3. Define and describe indoor housing, outdoor housing and sheltered housing facilities and the specific requirements for each type of facility

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This section will cover requirements for primary enclosures.

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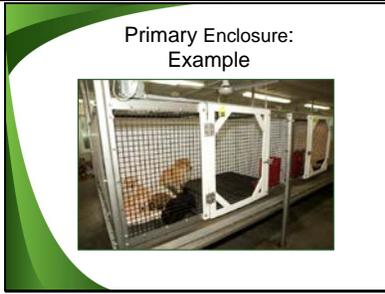


A primary enclosure is any structure or device used to restrict an animal to a limited amount of space. Examples of primary enclosures include a room, pen, run or cage.

The primary enclosure in the photo is a pen built into the facility. It provides the dog access to an outside run.

*Photo: A Eaglin: USDA: APHIS*

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This dam and her pups are housed in a cage (primary enclosure) within an indoor housing facility.

*Photo: A. Eaglin: USDA: APHIS*

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These photos show a dog in both the outdoor and indoor portion of a sheltered housing facility. They can go inside or outside as they wish. Note the heavy plexiglass door providing access between the two portions.

*Photos: D. Ausen: CFSPH: ISU*

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These is an outdoor housing facility. Dogs are provided with shelter from rain and sun, including shade from trees.

*Photos: D. Ausen: CFSPH: ISU*

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The following slides discuss the minimum requirements for all primary enclosures.

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Primary enclosures must meet certain minimum requirements. They must be designed and constructed of suitable materials. They must be structurally sound and kept in good repair. In addition, primary enclosures must protect the animals from injury, securely contain them and keep them clean and dry. The next slides will discuss these requirements in more detail.

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**Protect from Injury**

- No sharp points or edges
- Floors keep feet and legs from injury (falling through spaces in slats or mesh)
- No openings large enough to allow dog's head or body to pass through



Primary enclosures must have no sharp points or edges which could injure the dogs in the enclosure. Floors must be designed so that they prevent the dog's feet and legs from falling through spaces between slats or mesh. The enclosure must not have any openings large enough for a dog's head or body to pass through.

*Photo: D. Ausen: CFSPH: ISU*

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**Securely Contain**

- Keep dog in enclosure
- Keep other animals out
- Enough space so dog can:
  - Turn around freely
  - Stand, sit and lie in a normal comfortable position and walk in a normal manner
- Suspended floors must not sag or bend

Primary enclosures must securely contain the dogs within them. They must also prevent other animals from entering the enclosure. The primary enclosure must have enough space so the dog can turn around freely, stand, sit and lie in a normal comfortable position and walk in a normal manner. If suspended floors are used, they must be supported so they do not sag or bend.

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**Keep Clean and Dry**

- Shelter from extreme temperatures or weather
- Shade and shelter for all dogs at the same time
- Easy, convenient access to clean food and water
- Able to clean and sanitize surfaces
- Able to repair or replace worn surfaces

A primary enclosure must keep dogs clean and dry and:

- Provide shelter from extremes in temperatures or weather
- Provide shade and shelter for all dogs in the enclosure at the same time
- Have convenient and easy access to clean food and water
- Have surfaces that are able to be cleaned and sanitized
- Must be able to repair or replace worn surfaces

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**Compatible Grouping**

This section will describe the importance of group compatibility.

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**Compatible Grouping**

Regularly observe dogs for signs of incompatible grouping:

- Overly aggressive/vicious
- Wounds: head, neck, face and legs
- Ruffled or thin hair coat, scratches or bites
- Restricted access: food or water
- Sick, thin or weak dog in same unit as healthy dogs



Dogs housed together must be compatible. Regularly observe dogs interacting with other dogs in their enclosures for signs of incompatibility.

Some signs that dogs housed together may be incompatible include:

- Overly aggressive or vicious behavior by an animal toward others in the enclosure
- Evidence of wounds, especially on the legs and around the neck and face
- Ruffled or thin hair coat with signs of skin trauma (e.g., scratches or bites)
- Restriction of an animal's access to food, water and/or shelter by another animal
- A sick, thin or weak dog in the same unit as healthy dogs, especially in the case of a puppy that is smaller or weaker than its littermates

*Photo: A. Eaglin: USDA:APHIS*

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**Compatible Grouping**

Regulations require that these dogs NOT be housed together:

1. Females in heat with male dogs, except for breeding
2. Vicious or overly aggressive dogs must be housed separately
3. Puppies less than 4 months old and adults, except dam or foster dam

The Animal Welfare Act Regulations state that the following groups of dogs may NOT be housed in the same primary enclosure:

1. Females in heat (estrus) may not be housed in the same primary enclosure with males except for breeding purposes.
2. Any dog with a vicious or overly aggressive disposition must be housed separately.
3. Puppies 4 months of age or younger may not be housed in the same primary enclosure with adult dogs other than their dam or foster dam.

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**Compatible Grouping (cont'd)**

4. Dogs with other animal species unless compatible
5. Isolate dogs with or suspected of having contagious disease from healthy dogs
6. No more than 12 adult nonconditioned dogs in same primary enclosure

4. Dogs may not be housed in the same primary enclosure with any other species of animals unless they are compatible.

5. Dogs that have a contagious disease or are suspected of having a contagious disease must be isolated from healthy animals in the colony, as directed by the attending veterinarian. When an entire group or room of animals is known or believed to be exposed to an infectious agent, the group may be kept intact during the process of diagnosis, treatment or control.

6. No more than 12 adult nonconditioned dogs may be housed in the same primary enclosure.

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**Space and Exercise Requirements**

Primary enclosures must meet or surpass requirements set by the regulations for minimum space and exercise for the dogs housed in them.

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### Minimum Space Requirement

- Minimum amount of space dogs must have
- Formula for calculating minimum space requirements
- Handout shows how to calculate space



The regulations establish minimum space requirements for dogs in primary enclosures. The regulations have a formula for calculating the minimum amount of space. The image on this slide shows a handout developed to aid in calculating the minimum space requirement. The next slides will demonstrate how to complete the calculation to determine the minimum amount of space a dog needs.

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### Measure Dog's Length

Measure the dog from the tip of the nose to the base of the tail

- Standing or lying flat
- Measure in a straight line. Do not follow the contours of the dog's body
- Add 6 to the dog's length in inches

Dog's length (in) + 6 =  
37 in + 6 = 43 in



In this section, we are going to work through an example to show how to calculate the minimum space requirement for a dog in a primary enclosure. Shadow, the dog in the photo, measures 37 inches from the tip of her nose to the base of her tail. Add 6 to Shadow's length to complete the first step of the calculation. The sum is 43.

*Photo: A. Kingsbury: CFSPH: ISU*

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### Measure Dog's Length



This is a video clip demonstrating how to measure a dog.

*Video: A. Kingsbury: CFSPH: ISU*

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### Calculate Minimum Floor Space

Multiply sum from step 1 by itself  
(Dog's length (in) + 6) x (Dog's length (in) + 6) = \_\_\_\_  
**(37 + 6) x (37 + 6) = 1849 sq. in.**

1849 sq. in. is minimum amount of floor space in square inches.

Convert to sq. ft. by dividing by 144  
 $\frac{1849}{144} = 12.84$  sq. ft. floor space

Next, multiply the sum from Step 1 by itself to find the number of square inches of space required in Shadow's primary enclosure.  
 $43 \times 43 = 1849$  square inches

Divide 1849 by 144 to calculate the minimum amount of space in square feet.  $1849/144 = 12.84$  sq. ft.

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### Dogs in Group Housing

The total amount of floor space must meet or exceed each dog's minimum requirement.



*Photo: A. Eaglin: USDA: APHIS*

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### Height Requirement

- Measure dog in normal standing position
- Minimum of 6 inches from top of dog's head to top of cage



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### Dams with Puppies

- Separate calculation for dams with nursing puppies
- Dog's breed and behavioral characteristics
- Guidance from attending veterinarian

The regulations have special space requirements for dams with nursing puppies. In addition to using the formula for calculating the minimum space required, other factors must be considered including the dogs' breed and behavioral characteristics, and guidance from the attending veterinarian. The next section will walk through the calculation for dams with nursing puppies.

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### Dam's Space Requirement

1. Measure dam  
Tip of nose to base of tail = 37"
2. Add 6 inches to length  
Dog's length (in) + 6 = \_\_\_  
37 in. + 6 = 43 in.
3. Multiply sum by itself  
 $(37 + 6) \times (37 + 6) = 1849$  sq in
4. Convert to sq. ft.  
 $\frac{1849}{144} = 12.84$  sq. ft.



Shadow has a litter of 5 puppies. From the last example, we know that she is 37 inches long from the tip of her nose to the base of her tail. She needs a minimum of 1849 square inches or 12.84 sq. ft. of floor space

*Photo: A. Kingsbury: CFSPH: ISU*

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### Minimum Space Per Puppy

- Each puppy needs 5% of dam's minimum space.
- Dam's min. space x 0.05 = space per puppy  
 $12.84 \text{ sq ft} \times 0.05 = .642 \text{ sq ft space/puppy}$
- Space per puppy x # of pups = space for litter  
 $.642 \times 5 \text{ pups} = 3.21 \text{ sq ft for all pups}$

The regulations require that each puppy has 5% of the dam's minimum floor space. To calculate the minimum space needed for each puppy, take the minimum floor space required for the dam and multiply it by 0.05. In the example, Shadow needs 12.84 sq. feet of floor space. Take this number and multiply by 0.05 to get the minimum amount of floor space for each puppy.

Shadow has 5 puppies, so take the minimum space for one puppy and multiply by 5. The result is the amount of space the litter of puppies needs. Shadow's puppies need a minimum of 3.21 sq. ft. of floor space

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### Total Floor Space

Add space for dam to total space for litter  
 $12.84 \text{ sq ft} + 3.21 \text{ sq ft} = 16.05 \text{ sq ft}$



The total floor space for Shadow and her litter is 12.84 sq. ft. - Shadow's minimum floor space + 3.21 sq. ft. (space needed for 5 puppies) for a total minimum floor space of 16.05 sq. ft.. Here is an example of a similar-sized dog with a litter. She is housed alone in an enclosure that includes a whelping area within a larger primary enclosure.

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**Written Exercise Plan**

Required by regulations

- Applies to all dogs except dams with nursing puppies and dogs under 12 weeks of age
- Exercise requirement may be met by providing sufficient space in the primary enclosure
- Written plan, available for review

The regulations also set out a requirement for creating a written exercise plan. The exercise plan requirement applies to all dogs except dams with nursing puppies and dogs under 12 weeks of age. In some cases, the exercise plan requirement can be met by providing sufficient space in the primary enclosure.

The plan must be in writing and available for review by the Inspector.

This course has a separate presentation discussing the exercise plan requirement.

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**Other Requirements for Primary Enclosures**

This section describes some of the other minimum requirements for primary enclosures.

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**Cleaning and Sanitizing Primary Enclosures**

This section describes the cleaning and sanitizing regulations for primary enclosures.

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**General Cleaning Guidelines**

Daily removal of feces, urine and food waste from primary enclosures

Removal should occur daily and as often as needed to prevent soiling of animals.

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**Animal Contact Areas**

Daily spot cleaning of hard surfaces that dogs contact daily

- Sanitize at least every two weeks, or more often if necessary

Daily spot clean/rake non-hard/porous surfaces

- Often enough so animals avoid contact with excreta
- Replace when raking/spot cleaning not sufficient to prevent or eliminate:
  - Odors, insect, pest or vermin infestations

Cleaning animal contact areas –  
Spot clean all hard surfaces that dogs come into contact with on a daily basis. Sanitize these surfaces at least every two weeks, or more often if necessary to minimize disease hazards.

Hard Surfaces include:

- Sealed concrete
- Sealed wood
- Ceramic tile
- Stainless steel or other metals
- Glass board
- Formica
- Non-hard/Porous surfaces include: dirt, sand, gravel, grass

Floors made of dirt, sand, gravel, grass, absorbent bedding, or other similar material must be spot cleaned on a daily basis. These surfaces must be raked or spot cleaned often enough to ensure that all animals in the enclosure can avoid contact with the excreta. Contaminated material must be replaced when raking and spot cleaning are not sufficient to prevent or eliminate odors, or infestations of insects, pests or vermin.

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**Other Surfaces**

- Clean and sanitize when necessary to meet generally accepted husbandry standards and practices
- Remove feces, urine and food waste in pans or on the ground under primary enclosures as often as necessary to prevent excessive accumulation, keep dogs clean and reduce insects, pests, odors and disease risk

All other surfaces must be cleaned and sanitized when necessary to satisfy generally accepted husbandry standards and practices. Feces, urine and food waste located in pans or on the ground underneath primary enclosures must be removed as often as necessary to prevent excessive accumulations, keep the dogs clean, and reduce insects, pests, odors and the risk of disease.

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**Steam and Water Cleaning**

1. Remove dogs from enclosure
  - unless enclosure is large enough to avoid harm, wetting or distress to dogs
2. Protect dogs in other enclosures from contamination by water or waste
3. Clean pans under primary enclosures to prevent waste accumulation and reduce disease risk
4. Remove standing water after cleaning

Steam and water cleaning procedures for primary enclosures: (hosing, flushing or other methods)

- Remove the dogs from the enclosure unless the enclosure is large enough to ensure they will not be harmed, wetted, or distressed during the process
- Remove standing water from the enclosure after cleaning
- Protect animals in other primary enclosures from contamination by water or waste during cleaning

Clean pans under primary enclosures with grill-type floors and ground areas under raised runs with mesh or slatted floors as often as necessary to prevent the accumulation of wastes and to prevent the accumulation of feces and food waste and to reduce disease hazards, pests, insects and odors.

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**Sanitization:  
Enclosures and Receptacles**

- Must clean and sanitize at least once every 2 weeks or more often as needed
- Must clean and sanitize before using for another dog
  - Primary enclosures
  - Food and water bowls



All primary enclosures and food and water receptacles must be sanitized at least once every 2 weeks or more often as needed to prevent accumulation of dirt, debris, food waste, excreta, algae, mineral deposits, other disease hazards.

These enclosures must be cleaned and sanitized before they can be used to house, feed or water another dog or social grouping of dogs.

*Photo: D. Bickett-Weddle: CFSPH: ISU*

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**Sanitizing Hard Surfaces**

Use one of these methods:

- A. Steam Cleaning OR
- B. Washing in hot (180° F water) and soap/detergent OR
- C. Removing all organic material and mineral buildup; wash with detergent and disinfectant solutions or combination detergent/disinfectant product; followed with clean water rinse



The Animal Welfare Regulations require that one of the following methods be used to sanitize primary enclosures.

Sanitization methods: (must use one of these)

- Live steam under pressure OR
- Washing in hot (180 degree F) water and soap or detergent, as with a mechanical cage washer OR
- Removing all organic materials and mineral buildup and washing all surfaces with appropriate detergent and disinfectant solutions or by using a combination of detergent/disinfectant product to provide sanitization and following up with a clean water rinse

*Photo: D. Ausen: CFSPH: ISU*

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**Pens, Runs, Outdoor Housing**

Materials that cannot be sanitized by previous methods:  
(porous/non-hard surfaces)

Remove contaminated materials to prevent

- Odors
- Diseases
- Pests
- insects and vermin

Direct sunlight aids in disinfection

Pens, runs and outdoor housing areas that use material that cannot be sanitized using the methods provided above (gravel, sand, grass, earth or absorbent bedding):

- Must be sanitized by removing the contaminated materials as necessary to prevent odors, diseases, pest, insects, and vermin infestation
- Exposure to direct sunlight will aid in disinfecting the area

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**Indoor Facilities:  
Special Requirements**

This section discusses specific requirements for indoor housing facilities.

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**Indoor Facility**

Building intended to house animals which has :

- Environmental controls to regulate
  - Temperature
  - Humidity
  - Odors
- Is an enclosed space with continuously connected roof, walls and floor
- Has at least one door for entry and exit that can be opened and shut
- Windows covered by transparent glass or hard plastic

The different types of housing described in the regulations were described in part one of the housing presentation. An Indoor Housing Facility is:

A building intended to house animals which has

- Environmental controls to regulate temperature and humidity and for rapidly eliminating odors.
- An enclosed space. Which means the roof, walls and floor are continuously connected (a shed or barn set on top of the ground does not have a continuous connection between the walls and the ground unless a foundation and floor are provided)
- Building has at least one door for entry and exit which can be opened and shut
- Windows or openings which provide natural light must be covered by transparent material such as glass or hard plastic

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**General Requirements:  
Temperature and Humidity**

Indoor facilities must have sufficient heating and cooling systems to:

- protect dogs from extreme temperatures and humidity
- provide for health and well-being



The regulations have specific requirements for temperature and humidity in indoor facilities. These are in addition to other temperature requirements found in the regulations.

In general, indoor facilities must have sufficient heating and cooling to protect dogs from extremes in temperature and humidity and provide for their health and well-being.

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**Indoor Housing: Temperature**

- Not colder than 50°F
  - Unacclimated dogs
  - Breeds that are not cold tolerant
  - Sick, aged, infirm or young dogs
- If below 50°F provide
  - Dry bedding, resting boards, etc.

Specific requirements for indoor facilities include:  
The temperature in the facility must not fall below 50° F when dogs not acclimated (accustomed or adjusted to) to lower temperatures are present. This includes breeds that cannot tolerate colder temperatures without stress or discomfort, and sick, aged, infirm, and young animals, except as approved by the attending veterinarian.

If the temperature falls below 50° F, dry bedding, solid resting boards or other methods for conserving body heat must be provided.

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**Minimum and Maximum Temperatures**

**Minimum:** not below 45°F for more than 4 consecutive hours

**Maximum:** not above 85°F for more than 4 consecutive hours



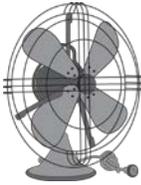
When dogs are present, the ambient temperature must not fall below 45° F for more than 4 consecutive hours or rise above 85° F for more than 4 consecutive hours.

*Illustration: O. Hashimi-Toroghi: CFSPH: ISU*

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**Ventilation**

- Sufficient ventilation at all times
  - Minimize odors, drafts, ammonia, condensation
  - Windows, vents, fans, air conditioning
- Above 85° F
  - Auxiliary ventilation: Fans, blowers, air conditioning



In indoor facilities, sufficient ventilation must be provided at all times for the health and well-being of the dogs and to minimize odors, drafts, ammonia, and moisture condensation. Windows, vents, fans or air conditioning may be used to provide ventilation.

When the ambient temperature rises above 85° F, provide auxiliary ventilation using fans, blowers or air conditioning.

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**Humidity**

- At a level to ensure health and well-being of dogs
- Follow directions of attending veterinarian and generally accepted professional and husbandry practices



Maintain the relative humidity at a level that ensures the health and well-being of the dogs housed in the facility. Follow the directions of the attending veterinarian and generally accepted professional and husbandry practices.

*Illustration: O. Hashimi-Toroghi: CFSPH: ISU*

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**Lighting**

- Sufficient light for inspection, cleaning and observation of dogs
- Natural or artificial
- Diurnal cycle
- Uniform lighting
- Protect dogs from excessive light



Facility lighting must be sufficient to permit routine inspection, cleaning and observation of the dogs. Animal areas must have regular natural or artificial light in a diurnal schedule (a period of day and night). Lighting must be diffused uniformly throughout the facility and provide enough light so that good housekeeping practices, cleaning and observations of animals can be carried out. Primary enclosures must protect dogs from excessive light.

The facility in the photo uses both artificial light and natural light from the windows.

*Photo: A. Eaglin: USDA: APHIS*

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**Impervious Surfaces**

The following surfaces must be impervious to moisture:

- Floors
- Walls
- Surfaces in contact with animals
- Ceilings if not replaceable



Floors, walls and surfaces in contact with animals must be impervious to moisture.

Ceilings must be impervious to moisture or be replaceable (e.g. suspended ceiling with replaceable tiles)

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**Impervious Surface**

Surface

- does not permit the absorption of fluids
- can be thoroughly and repeatedly cleaned and disinfected
- will not retain odors
- from which fluids bead up and run off or can be removed without being absorbed into the surface material

An impervious surface does not permit the absorption of fluids

- Can be thoroughly and repeatedly cleaned and disinfected
- Will not retain odors
- And fluids will bead up and run off or fluids can be removed without being absorbed into the surface material

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**Example: Impervious Surface**



This indoor facility has sealed concrete floors and the walls are an easily cleanable surface. The ceilings have replaceable tiles.

*Photo: A. Eaglin: USDA: APHIS*

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**Sheltered Facilities:  
Special Requirements**

This section will describe some special requirements for sheltered facilities.

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**Sheltered Housing Facility:  
Definition**

Facility that at all times provides:

- Shelter
- Protection from the elements
- Protection from temperature extremes

May consist of:

- Runs or pens totally enclosed within a building
- Runs or pens which have connected indoor-outdoor areas, where the inside portions are inside of a totally enclosed building

A facility that provides shelter, protection from the elements and protection from temperature extremes at all times.

May consist of runs or pens totally enclosed in a barn or building or a facility with connecting inside/outside runs or a facility with inside pens totally enclosed in the building.

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**Temperatures:  
Sheltered Portion**

- Not colder than 50° F
  - Unacclimated dogs
  - Breeds that are not cold tolerant
  - Sick, aged, infirm or young dogs
- If below 50°F provide
  - Dry bedding, resting boards, etc.

The sheltered portion of the facility must be sufficiently heated and cooled to protect dogs from extremes in temperature and humidity to provide for their health and well-being.

The ambient temperature must not fall below 50° F for dogs not acclimated to lower temperatures:

- breeds that cannot tolerate lower temperatures without stress or discomfort
- for sick, aged, young, or infirm dogs, except as approved by the attending veterinarian

When temperatures fall below 50° F, dry bedding, solid resting boards or other methods must be used for conserving body heat must be used.

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**Minimum and Maximum  
Temperatures**

**Minimum:** not below 45°F for more than 4 consecutive hours

**Maximum:** not above 85°F for more than 4 consecutive hours



The ambient temperature must not fall below 45° F for more than 4 consecutive hours when dogs are present.

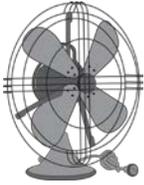
The ambient temperature must not rise above 85° F for more than 4 consecutive hours when dogs are present.

*Illustration: O. Hashimi-Toroghi: CFSPH: ISU*

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**Ventilation:  
Sheltered Portion**

- Sufficient ventilation at all times
  - Minimize odors, drafts, ammonia, condensation
  - Use windows, vents, fans, air conditioning
- Above 85° F
  - Auxiliary ventilation: Fans, blowers, air conditioning
- Humidity level to ensure health and well-being



In indoor facilities, sufficient ventilation must be provided at all times for the health and well-being of the dogs and to minimize odors, drafts, ammonia, and moisture condensation. Windows, vents, fans or air conditioning may be used to provide ventilation.

When the ambient temperature rises above 85° F, provide auxiliary ventilation using fans, blowers or air conditioning.

Maintain the relative humidity at a level that ensures the health and well-being of the dogs housed in the facility. Follow the directions of the attending veterinarian and generally accepted professional and husbandry practices.

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**Lighting**

- Sufficient to permit routine inspection, cleaning and observation
- Natural or artificial light
- Diurnal schedule
- Uniform throughout facility
- Protection for dogs from excessive light



Facility lighting must be sufficient to permit routine inspection, cleaning and observation of the dogs. Animal areas must have regular natural or artificial light in a diurnal schedule (a period of day and night). Lighting must be diffused uniformly throughout the facility and provide enough light so that good housekeeping practices, cleaning and observations of animals can be carried out. Primary enclosures must protect dogs from excessive light.

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**Shelter from the Elements**

- Dogs must have shelter from elements at all times
- All dogs must be able to sit, stand, turn about freely and lie in a normal manner



Provide shelter from the elements at all times to protect dogs' health and well-being.

Shelter structures must be large enough to allow each animal to sit, stand, and lie in a normal manner and to turn about freely.

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**Impervious Surfaces**

- These must be impervious to moisture:
  - Indoor floor areas in contact with dogs
  - Outdoor floors in contact with dogs, when not exposed to direct sunlight, or made of hard material such as wire, wood, metal or concrete
  - All walls, boxes, houses, dens and other surfaces with dog contact

The following areas in the sheltered facility must be impervious to moisture:

- Indoor floor areas in contact with the dogs
- Outdoor floor areas in contact with the animals when the floor areas that are not exposed to direct sunlight or made of hard material such as wire, wood metal or concrete; and
- All walls, boxes, houses, dens and other surfaces in contact with dogs.

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**Replaceable Surfaces**

Outside non-hard surfaces with dog contact and exposed to direct sunlight and replaceable:

- Compacted earth
- Absorbent bedding
- Sand
- Gravel
- Grass

Outside floor areas in contact with dogs and exposed to direct sunlight may consist of compacted earth, absorbent bedding, sand, gravel or grass.

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**Outdoor surfaces: Examples**



Examples of the outdoor portions of sheltered housing facilities. Note that the surface of the facility on the left is grass. The surface of the facility on the right is gravel. Both surfaces can be cleaned and replaced when too heavily soiled.

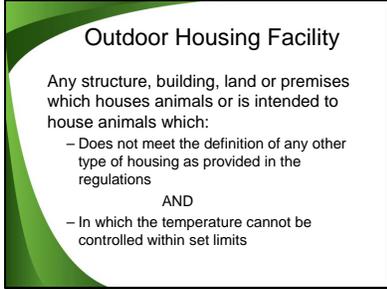
*Photos: A. Eaglin: USDA: APHIS*

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This section will describe special requirements for outdoor facilities.

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An outdoor housing facility is any structure, building, land or premises which houses animals or is intended to house animals which:

- Does not meet the definition of any other type of housing facility AND
- In which temperature cannot be controlled within set limits

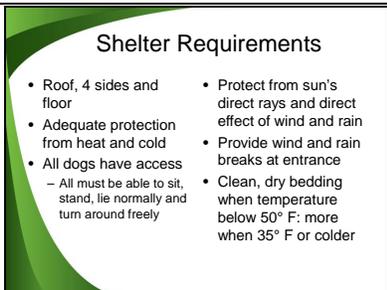
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The following categories of dogs must not be kept in an outdoor facility, unless specifically approved by the attending veterinarian

- Dogs not acclimated to the temperatures prevalent in the area/region
- Breeds that cannot tolerate the prevalent temperatures without stress or discomfort (short haired breeds in cold climates)
- Sick, infirm, aged or young dogs.
- If acclimation status is unknown, the dog may not be kept in an outdoor facility when then ambient temperature is below 50 degrees F

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The following items may not be used as shelter structures:

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- Metal barrels,
- Cars
- Refrigerators or freezers

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**Surfaces**

These surfaces must be impervious to moisture;

- Building surfaces in contact with dogs
- Hard surfaces in contact with dogs

Replace when worn or soiled;

- Can't be readily cleaned/sanitized
- Floors of compacted earth, dirt, sand, gravel, absorbent bedding or grass



In outdoor shelters certain surfaces must be impervious to moisture. Other surfaces must be replaced when worn or soiled.  
 All surfaces must be maintained on a regular basis.  
 Building surfaces in contact with the dogs and hard surfaces in contact with the dogs must be impervious to moisture.  
 Surfaces which cannot be readily cleaned or sanitized – including houses, dens, etc. – must be replaced when worn or soiled.  
 Floors in outdoor housing facilities may be of compacted earth, absorbent bedding, sand, gravel or grass. Flooring material must be replaced if there are prevalent odors, disease, pests or vermin.

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**Shade**

Must provide separate outdoor area(s) of shade for all dogs

- Large enough for all dogs to use at same time
- Provide protection from sun's direct rays



In addition to shelter, the outdoor facility must provide separate outside areas of shade.

- These must be large enough for all dogs to use at the same time
- Protect the dogs from the sun's direct rays

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**Conclusion**

You should now be able to:

1. List the general requirements for primary enclosures
2. Briefly describe cleaning requirements for primary enclosures
3. Define and describe indoor housing, outdoor housing and sheltered housing facilities and the specific requirements for each type of facility

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1. List the general requirements for primary enclosures
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Questions?

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**Acknowledgments**

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