

Public Health comments on proposed city of Seattle ordinance to allow miniature, dwarf and pygmy goats as pets

Analysis prepared by Public Health—Seattle & King County -- August 8, 2007

- **Environmental Health Services Division (Zoonotic Disease Program)**
- **Prevention Division (Communicable Disease/Epidemiology Section)**

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Public Health has been asked to review and comment on public health concerns related to a proposed City of Seattle land use and zoning ordinance to allow keeping of miniature, dwarf, and pygmy goats and providing for licensing and licensing fees for these animals. Veterinary and medical epidemiology staff from Communicable Disease/Epidemiology and Environmental Health conducted a review of relevant scientific literature and of other city ordinances and submit the following comments and recommendations.

Background: Proposed ordinance

The proposed ordinance that we have reviewed is Version 3 dated 7/17/2007. It was provided to us by Phyllis Shulman of Seattle Councilmember Richard Conlin's office. We have also been contacted for comments by Don Jordan, Executive Director of Seattle Animal Shelter and Mike Podowski, Land Use Policy Supervisor at Seattle Department of Planning and Development.

The draft ordinance includes following provisions:

23.42.052 Keeping of Animals

The keeping of small animals, farm animals, domestic fowl, bees and miniature goats, is permitted outright in all zones as an accessory use to any principal use permitted outright or to a permitted conditional use, in each case subject to the standards of this Section.

Miniature Goats. The types of goats commonly known as Pygmy, Dwarf and Miniature Goats may be kept as small animals, provided that male miniature goats are neutered and all miniature goats are dehorned. Nursing offspring of miniature goats licensed according to the provisions of this Code may be kept until the offspring is weaned without violating the limitations of subsection A.

9.25.022 Definitions

“Miniature goat” means those types of goats commonly known as Pygmy, Dwarf and Miniature Goats

9.25.053 Potbelly pig and miniature goat licenses

Miniature goats. Within thirty (30) days of entry of any miniature goat into the City of Seattle, the owner of the miniature goat must obtain a valid license for such animal with the exception of nursing offspring born to a licensed miniature goat. A valid license must be obtained for offspring of a licensed miniature goat upon being weaned. Along with the fee for the license or renewal, the owner must present proof that the miniature goat is dehorned, and if the miniature goat is male, that it is neutered.

9.25.084 Offenses relating to control

It is unlawful for the owner to permit any miniature goat to leave the owner's premises except for purposes of transport.

9.26.020 Cat, dog, or goat license fee--Renewal

Annual license Miniature goat...\$20

Annual license with a 12-month renewal....\$30

Public Health—Seattle & King County analysis

Keeping of goats as pets or for meat or milk production is not without some public health risk. Pathogens that have been documented in the scientific literature to be transmitted from goats or

goat products to people include *E. coli* O157:H7, *Toxoplasma*, *Salmonella*, *Campylobacter*, *Brucella*, *Streptococcus*, *Listeria*, *Coxiella* (Q fever), Orf virus, and others. See the attached Tables for summaries of some goat-associated outbreaks. Most of the reports of gastrointestinal outbreaks were associated with goats in animal exhibits (petting zoos, farm tours, field trips, and zoos) or consumption of unpasteurized (raw) goat milk or cheese. Single cases occur more frequently than outbreaks, but usually are not reported in the scientific literature. One King County child was infected with *E. coli* O157:H7 several years ago while visiting her grandparents, who kept a small pen of goats in their backyard.

Transmission of infections from goats to people can occur through the fecal-oral route (*E. coli*, *Salmonella*, others), from exposure to birthing fluids or placental tissues (Q fever, brucellosis), through direct contact (Orf virus), or through consumption of milk or milk products that have not been pasteurized (*E. coli*, *Listeria*, others). The pathogens causing brucellosis and Q fever may also be airborne and are capable of causing life-threatening illness – both in fact are classified by the Centers for Disease Control and Prevention as class B bioterrorism agents.

Fortunately, serious illnesses from infections associated with goats are rare. Of the more common pathogens found in goats, *E. coli* O157:H7 infections due to fecal-oral transmission and infections associated with the consumption of unpasteurized goat milk or cheese are of significant public health concern because these diseases can be severe, particularly in young children and the elderly. *E. coli* O157:H7 infection causes diarrhea that is often bloody and accompanied by abdominal cramps; the illness typically resolves within a week. However, some people, especially young children, will go on to develop hemolytic uremic syndrome (HUS) a serious illness that may result in kidney failure, lifetime disability, or death. In addition to children, pregnant women, the elderly, and immunocompromised persons are at greater risk of serious disease outcomes.

Public Health recommendations

If the ordinance is adopted, we strongly recommend that disease risks be mitigated through provisions within the ordinance and through education of goat owners and prospective goat owners in ways to prevent disease transmission. Consideration should be given to making information on disease risks widely available to prospective owners before they decide to keep goats, and to providing goat owners with information about prevention of zoonotic diseases, sanitation, and good husbandry practices when they apply for a goat license. Sanitation and disease prevention information can be developed by Public Health—Seattle & King County. Public Health, Seattle Animal Shelter, Seattle Tilth, WSU King County Extension, and other agencies could post information on their websites and in print materials. Consideration should be given to providing information in Spanish and other languages because goats may be kept for cultural reasons and as a preferred meat or milk source in some ethnic communities.

Specifically, we recommend the following:

- Goats kept in the city of Seattle should be confined to the owner's premises and not be walked on city streets, taken to parks, or brought to public events such as street fairs or parades. This will help prevent environmental contamination by

goat feces and reduce risks to people, especially children, playing in parks and other public places.

- Goat pens should be set back from neighbor's yards to preclude direct contact between goats and neighbors (particularly children) and to reduce environmental contamination of neighboring premises.
- Goat manure should be adequately composted to destroy pathogens before use on vegetable gardens and landscaping. Adequate composting consists of maintaining a compost pile temperature of 130-150⁰ F for 3 days. For more information, see www.gardening.wsu.edu/stewardship/compost/manure/manure0.htm
- All goat milk intended for consumption by humans, dogs or cats, or for production of cheese, should be carefully pasteurized. For more about the health risks of raw milk, see www.metrokc.gov/health/prevcont/docs/rawmilk.pdf .
- Good sanitation and hand-washing should be practiced by goat owners and anyone handling goats or visiting premises where goats are kept.
- Goat owners should be made aware of the risk of disease transmission when does are kidding (giving birth). Persons other than the goat owners should be discouraged from attending births and handling young kids.
- In addition, the proposed ordinance contains introductory declarations. We suggest that these be edited to reflect good public health practice as follows:

AN ORDINANCE relating to land use and zoning and the keeping of small animals, amending Sections 23.42.052, 9.25.022, 9.25.030, 9.25.050, 9.25.052, 9.25.080, 9.25.084, 9.25.100; and 9.26.020 to allow the keeping of miniature goats and providing for the licensing and licensing fees therefor.

WHEREAS, goats, along with dogs are the earliest animals domesticated by humans, roughly 10,000 years ago; and

WHEREAS, numerous cultures worldwide keep goats and more people worldwide drink goat milk than any other animal's; and

WHEREAS, many immigrants from all over the world are familiar with keeping goats; and

WHEREAS, miniature goats are considered excellent pets due to their good-natured personalities, friendliness, faithfulness, and hardy constitution; and

WHEREAS, miniature goats are no bigger than a number of species of large domestic dogs; miniature goats average around 24" tall and 50-100 pounds, compared to some large dogs that average around 30" tall and can weigh up to 200 pounds; and

WHEREAS, miniature goats can be a sound way to provide milk and cheese to families **ADD: if milk is properly pasteurized prior to consumption or cheese production;** and

WHEREAS, there are numerous benefits for urban sustainability that goats provide including that their is an excellent source of garden compost **ADD: provided it is properly composted to reach temperatures that will destroy potentially harmful pathogens,** their hair is a renewable source of fiber, and goats can provide an alternative to lawn mowers; and

WHEREAS, goats are valuable for controlling noxious weeds and clearing brush and undergrowth; and

DELETE:

WHEREAS, goats do not create any significant public health risk and do not commonly carry diseases, such as rabies, that are problematic for humans; and

WHEREAS, female and neutered male goats do not generate significant odors, and

WHEREAS, municipalities including Portland, Oregon and Everett, Washington have codes that permit miniature goats to be kept; and

DELETE

WHEREAS, miniature goats are easily handled by children;

(a goat weighing 50-100 lbs cannot be easily restrained by a child when the goat wants to go the other way):

Table 1. Outbreaks associated with goat contact

| Location | Venue | Causative Agent/Disease | Animals Present | Date | Number People Affected ^a |
|------------------------------|--------------|-------------------------|---|------|-------------------------------------|
| Ontario ²² | Fair | <i>E coli</i> O157:H7 | Goats Sheep Cattle | 1999 | 159 P 11 C |
| Pennsylvania ¹ | Dairy Farm | <i>E coli</i> O157:H7 | Cattle Sheep Goats Llamas Pig | 2000 | 51 P 15 C |
| Washington ¹ | Dairy Farm | <i>E coli</i> O157:H7 | Goats Cattle | 2000 | 5 C |
| Oregon ¹⁷ | Fair | <i>E coli</i> O157:H7 | Goats | 2002 | 82 P 72 C |
| Vermont ²¹ | | <i>E coli</i> O157:H7 | Goat | 2003 | 6 P 1 C |
| Minnesota ²¹ | | <i>E coli</i> O157:H7 | Cattle Sheep Goat | 2003 | 5 C |
| North Carolina ³ | Fair | <i>E coli</i> O157:H7 | Goats Sheep | 2004 | 108 P 41 C |
| Florida ³ | Fair | <i>E coli</i> O157:H7 | Sheep Goats Cattle | 2005 | 63 P 20 C |
| Arizona ³ | Zoo | <i>E coli</i> O157:H7 | Goats Pigs Cattle | 2005 | 2 C |
| Florida ⁷ | Nature park | <i>E coli</i> O157:H7 | Goats Sheep Llama | 2007 | 5 C |
| North Carolina ¹⁰ | Restaurant | <i>E. coli</i> O157:H7 | Goat (slaughter) | 2007 | 20 C |
| California ² | Neighborhood | Q fever | Goats | 2001 | 2 C |

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|----------------------------|------------|---------|-------|------|------|
| | goat herd | | | | |
| Newfoundland ¹⁴ | Goat farms | Q fever | Goats | 1999 | 66 C |

^a **P = probable C = confirmed**

Table 2. Outbreaks associated with goat products

| Location | Causative Agent/Disease | Product Involved | Date | Number People Affected ^a |
|---|-------------------------------|-------------------------------|------|-------------------------------------|
| Texas ²³ | Brucellosis | Unpasteurized goat cheese | 1983 | 29 C |
| California ²⁰ | Toxoplasmosis | Unpasteurized goat milk | 1978 | 10 C |
| King County, WA ¹³ | <i>Campylobacter</i> | Unpasteurized goat milk | 1983 | 6 C |
| France ⁸ | <i>E coli</i> O157:H7 | Unpasteurized cow/goat cheese | 1992 | 4 C |
| France ⁹ | <i>Salmonella paratyphi</i> B | Unpasteurized goat cheese | 1993 | 273 C |
| Czech ⁶ | <i>E coli</i> O157:H7 | Unpasteurized goat milk | 1995 | 4 C |
| British Columbia ¹⁸ | <i>E coli</i> O157:H7 | Unpasteurized goat milk | 2001 | 5 C |
| Spain ¹⁹ | Brucellosis | Unpasteurized goat cheese | 2002 | 11 P 2 C |
| France ¹² | <i>E coli</i> O157:H7 | Unpasteurized goat cheese | 2003 | 3 C |
| Finland ¹⁶ | <i>Streptococcus equi</i> | Unpasteurized goat cheese | 2003 | 7C |
| France ¹¹ Sweden Switzerland Germany Austria England Netherlands | <i>Salmonella stourbridge</i> | Unpasteurized goat cheese | 2005 | 52 C |
| Estonia ¹⁵ | Tick-borne encephalitis virus | Unpasteurized goat milk | 2005 | 27 C |

^a **P = probable C = confirmed**

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