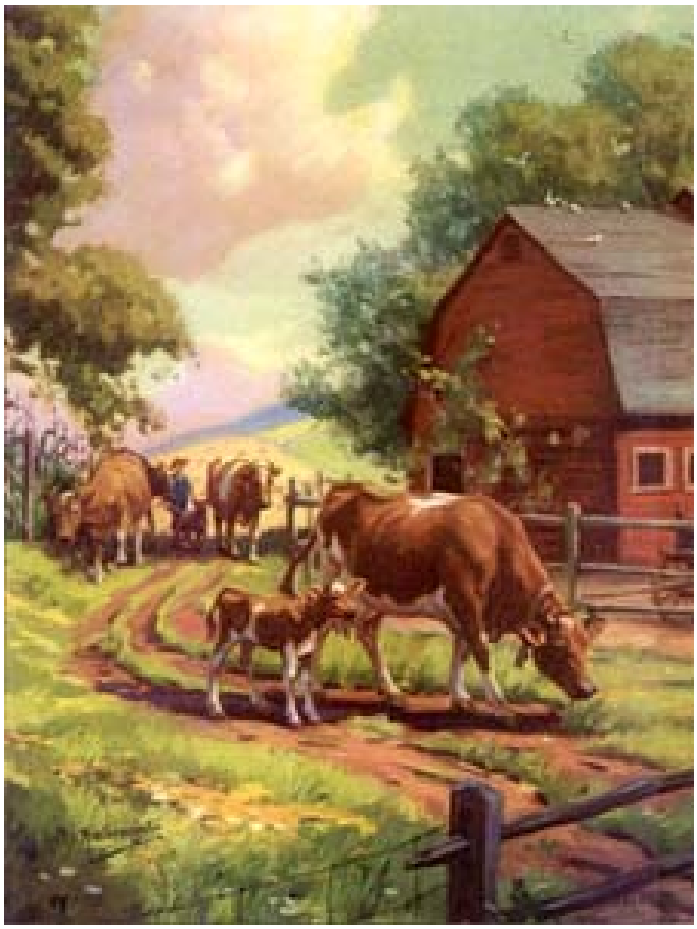
Washington State Department of Agriculture



Milk Producers Licensing Handbook

August 2005

Valoria H. Loveland, Director

AGR PUB 415-117 (R/8/05)

Inquiries regarding the availability of this publication in an alternate format should be directed to the WSDA Receptionist at (360) 902-1976 or Telecommunication Device for the Deaf (360) 902-1996.

FOREWORD

It is the responsibility of State and Federal regulatory agencies to uphold the supply of wholesome, quality food for the consumer. Without guidelines and regulations, the safety and quality of milk as we know it may not exist. The goal of Washington State Department of Agriculture (WSDA), Food Safety Program is to obtain voluntary compliance in a manner that is mutually beneficial for the milk industry as well as the consumer.

Washington State's dairy inspection program operates under the requirements of the relevant Washington State regulations and Public Health Service/Food and Drug Administration Pasteurized Milk Ordinance (PMO). Compliance with the PMO is essential for Washington's farm bulk tank units (BTUs). The standards applied in Washington State follow national standards that allow your milk (products) to move without restriction in interstate commerce.

As the holder of a Milk Producers license, you have accepted certain responsibilities in order to sell a Grade A product. The information included in this manual is intended to assist you, the dairy producer, in meeting inspection criteria for Grade A dairies and understanding the elements that are addressed during the licensing and inspection of your facility.

As a producer, your contact with WSDA will mainly be with the Food Safety Officer (inspector) assigned to your geographical area. This individual is trained in the field of milk sanitation and production and is qualified to help identify problems/violations that can affect the safety and quality of your milk. It is their responsibility to provide technical assistance when needed to help you remain in compliance with State and Federal regulations.

Please keep in mind the following:

- Milk Producer requirements are in effect 365 day a year – not just during regulatory inspections. By performing your own inspections and maintaining your facility, you will help ensure you are within compliance.
- The consuming public is depending on industry to produce a healthful, wholesome, high-quality product. You are the first step in this process.
- We will work with you in a cooperative way to ensure the public interest is protected, and your products have unrestricted market access.

If you have any questions, please contact the Food Safety Office in your area for assistance or clarification. For additional information, contact:

Washington State Department of Agriculture
Food Safety Program
P.O. Box 42560
Olympia, Washington 98504-2560
(360) 902-1876

Dairy Farm Licensing Handbook

Chapter 1: Applying for a Dairy Farm License

An application for the a Milk Producers License needs to be submitted during the following circumstances:

- Starting / Building a New Dairy *
- Change in Ownership *
- Farm Name Change
- Location Address Change
- Mailing Address Change
- Switching to a New Shipping Company

*These types of changes will require an inspection and a new satisfactory water sample completed prior to the receipt of a new license. If an immediate family member takes over the operations of the dairy farm from the original licensee, it is considered a name change only and will not require any additional processes.

When submitting a new application use this check list: (Examples attached)

- ✓ Application
- ✓ Current water sample
- ✓ Farm diagram
- ✓ Animal Health Testing

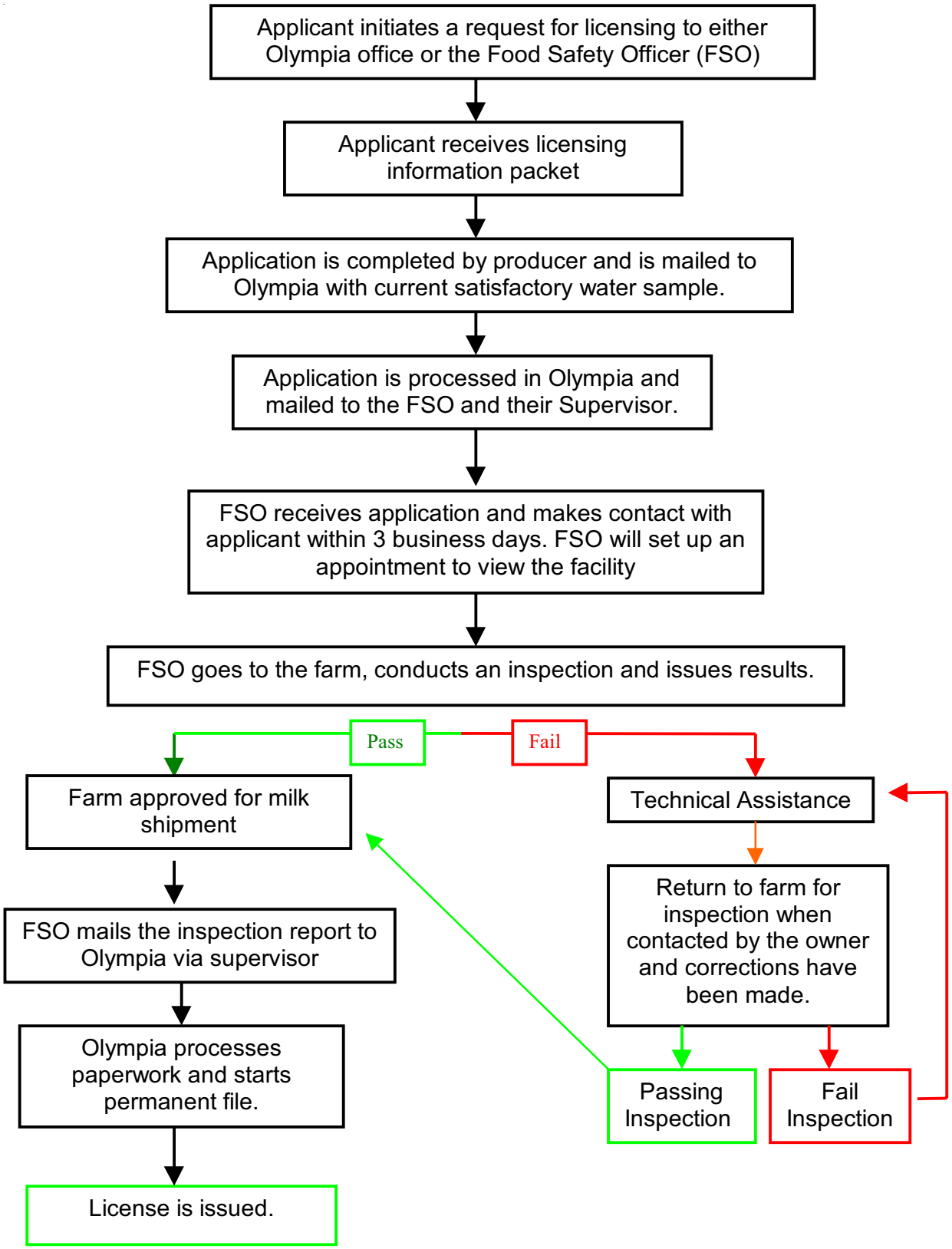
An application may also be submitted for any additional changes such as contact information or business structure. Please see the following flow chart for explanation of the licensing process. This process can take up to as long as four to six weeks. The earlier you can get the application submitted the sooner your dairy inspector, known as a Food Safety Officer, can add you to their schedule.

Once an application process is completed, whether it is a simple name change or a whole new dairy, notification will be sent to the following:

- USDA Agricultural Marketing Service
- Washington Dairy Products Commission
- Washington State Dairy Federation
- WSDA Livestock Nutrient Management Program
- Food Safety Regional Supervisor
- Food Safety Officer
- Co-op Field Representative

Notification may also be sent to the State Veterinarian's office and/or the Beef Commission.

Dairy Farm Licensing Flow Chart



Washington State Department of Agriculture
Food Safety Program
PO Box 42560
Olympia WA 98504-2560
(360) 902-1876

APPLICATION FOR A MILK PRODUCER LICENSE

TYPE OF APPLICATION *(Check All That Apply)*

O NEW **O FAMILY NAME CHANGE** **O ADDRESS CHANGE**

O CANCELLATION **O OWNERSHIP CHANGE** **O OTHER (Specify)** _____

APPLICANT INFORMATION *(Please Print)*

FARM NAME			
ADDRESS OF FARM (PHYSICAL LOCATION)			TELEPHONE NUMBER (INCLUDE AREA CODE)
LOCATION CITY	LOCATION STATE	LOCATION ZIP	COUNTY
MAILING ADDRESS OF FARM (IF OTHER THAN PHYSICAL LOCATION ADDRESS SHOWN ABOVE)			
MAILING CITY	MAILING STATE	MAILING ZIP	EMAIL ADDRESS/ FAX NUMBER
WILL BE SHIPPING MILK TO:	EFFECTIVE DATE		SHIPPING NUMBER

BUSINESS STRUCTURE INFORMATION

BUSINESS TYPE (CHECK ONE)

O INDIVIDUAL **O PARTNERSHIP** **O CORPORATION** **O LIMITED LIABILITY CORPORATION (LLC)**

PLEASE LIST NAMES, TITLES AND ADDRESSES OF ALL PARTNERS AND/OR CORPORATE OFFICERS BELOW. ATTACH ADDITIONAL SHEET IF NECESSARY.

PARTNER/CORPORATE OFFICER #1 NAME	PARTNER/CORPORATE OFFICER #1 TITLE	PARTNER/CORPORATE OFFICER #1 ADDRESS (INCLUDE CITY, STATE, ZIP)
PARTNER/CORPORATE OFFICER #2 NAME	PARTNER/CORPORATE OFFICER #2 TITLE	PARTNER/CORPORATE OFFICER #2 ADDRESS (INCLUDE CITY, STATE, ZIP)
PARTNER/CORPORATE OFFICER #3 NAME	PARTNER/CORPORATE OFFICER #3 TITLE	PARTNER/CORPORATE OFFICER #3 ADDRESS (INCLUDE CITY, STATE, ZIP)

PROVIDE NAME, ADDRESS & PHONE NUMBER OF INDIVIDUAL RESIDING IN WASHINGTON WHO IS AUTHORIZED TO RECEIVE AND ACCEPT OFFICIAL MAIL.

WA RESIDENT PROCESS AGENT NAME ***(REQUIRED)***	PROCESS AGENT ADDRESS (INCLUDE CITY, STATE, ZIP)	PROCESS AGENT PHONE # (INCLUDE AREA CODE)

IMPORTANT NOTICE TO APPLICANT

- All licensed Dairy Farms **MUST COMPLY** with the requirements of chapter 15.36 RCW.
- Uncorrected violations of the requirements of chapter 15.36 RCW may result in corrective action by the department as provided for in chapter 15.36 RCW or other applicable regulations.
- Such a license may be temporarily suspended or a civil penalty assessed by the director upon violation by holder of any terms of this chapter, or interference with the director in the performance of his duties, or revoked after an opportunity for a hearing by the director upon serious or repeated violations.
- Every milk producer and distributor shall permit the director access to all parts of the establishment during the working hours of the producer or distributor, which shall at a minimum include the hours from 8 a.m to 5 p.m.
- It is the responsibility of the milk producer to ensure they are also in compliance with other WSDA programs such as Livestock Nutrient Management and Livestock I.D., as well as other agency regulations, i.e. County Health District and Department of Ecology.

I have read and understand the above notice, and agree to the conditions as set forth therein.

SIGNATURE OF APPLICANT _____

TITLE _____ DATE SIGNED _____

AGR 2046 (R/3/05)

PLEASE RETURN COMPLETED APPLICATION TO: WSDA FOOD SAFETY PROGRAM

FARM LAYOUT DIAGRAM

Draw a diagram of your dairy farm to include the following main structures/features: **Milkroom**, **Milking Parlor**, **Cow Yard, Cattle Housing Areas,** and pertinent **Outbuildings.** Identify the location of the milk bulk tank, equipment wash sink(s), hand-wash sink, milk receiver(s), vacuum pump(s), compressor(s), farm water supply/supplies, back-flow prevention devices, stock watering tank(s), designated drug storage area(s)**,** chill water/ glycol systems, toilet room, storage room(s), temperature recorder(s), and hoseport(s).

ANIMAL HEALTH TESTING REQUIREMENTS

As stated in RCW 15.36.161: Cows, goats, and other mammals – Animal health requirements:

(1) All milking cows, goats, and other mammals must meet the animal health requirements established by the state veterinarian under the authority of chapter 16.36 RCW.

(2) Milk or milk products from cows, goats, and other mammals intended for consumption in the raw state must be from a herd which is tested negative within the previous twelve months for brucellosis, tuberculosis, and any other disease the director may designate by rule. Additions to the herd must be tested negative for the diseases within the previous thirty days before introduction into the herd. The state veterinarian shall direct all testing procedures in accordance with state and national standards for animal disease eradication.

_____ **1. Reviewed appropriate Animal Health rules and regulations.**

_____ **2.** Animal Identification System established and animal (s) identification recorded.

_____ **3.** Completed brucellosis testing. Date of testing: _____

_____ **4.** Completed tuberculosis testing. Date of testing: _____

Name of accredited veterinarian _____

_____ **5.** Check with WSDA Animal Health program for any additional testing requirements.

_____ **6.** Submitted records to WSDA, keeping a copy for your records.

I certify that the above information is correct and that I will follow the same requirements for each addition to my herd.

Signature of Applicant: _____

Title: _____

Date: _____

Questions & Answers:

Q1: **When do I need to fill out a new bulk tank application**?

A: When you are:

- relocating an existing tank within a facility, OR
- installing a new or used bulk tank or silo.

Q2: **Are there different regulations for goat/ sheep dairies**?

A: No. Technical assistance specifically geared toward small ruminant dairy farms can be obtained from the Dairy Practice Council (see contacts section of reference chapter). Your FSO can also provide great technical assistance with any structural questions you may have.

Q3: **What if the farm is leased**?

A: Parties involved shall decide who will be the responsible party as the license holder.

Q4: **Can there be more than one license on a farm**?

A: Yes. Contact WSDA for additional information and practicality of situation.

Q5: **How current must my herd health tests be?**

A: The State Veternarian establishes testing requirements based on current animal health concerns. Please contact the Animal Health Program at 360.902.1878 or visit www.agr.wa.gov for the most current information.

Chapter 2: Licensing Requirements

There is more to receiving a Milk Producer License than submitting a completed application (an application form, a satisfactory water sample, and a farm layout diagram). You must also pass the licensing inspection.

The licensing inspection requires all items marked as “L”, licensing requirement, or “C”, critical items, to be in compliance with an overall score of 90 or above. Some of the “L” items may only be one point debit items for a regular inspection, but these violations have been recognized as inspection items that need to be addressed prior to operating. You will notice that “L” items are mostly construction-related. This allows for any renovations or adjustments that need to be completed before the operation starts to avoid causing down time in your production.

WSDA dairy farm inspection standards are based upon chapter 15.36 RCW, current WACs, and relevant sections of the PMO. You can find copies of these documents in the reference chapter.

Questions & Answers:

Q1: **What happens if a licensing inspection fails**?
A: Once all needed corrections have been made, contact the FSO to schedule a new inspection.

Q2: **Do I need any other permits or licenses to begin operations**?
A: While it is not a requirement of the WSDA Food Safety Program, there may be other programs within WSDA or other agencies you should contact. Please check the contacts in chapter 7 for a listing.

Q3: **When may I begin operations**?
A: You may begin operating immediately upon passing the licensing inspection.

Q4: **Once licensed, where can I sell my raw milk?**
A: Licensed producers may only sell their milk for further processing either through the general milk pool or directly to a processing facility. In order to sell raw milk anywhere else, including retail raw milk for human consumption or for pet feed, additional licensing is required. You will also need to obtain additional licensing if you decide to do any value added processing yourself, such as farmstead cheeses. Please contact the Food Safety Program or talk with your Food Safety Officer about the requirements.

DAIRY FARM INSPECTION CRITERIA AND DEBIT VALUES

Washington State Department of Agriculture
Food Safety Program
P.O. Box 42560, Olympia, WA 98504-2560
Phone: (360) 902-1875 Fax: (360) 902-2087

Cows

		Debit Value
1. Abnormal Milk: (Maximum 5)		
Cows secreting abnormal milk milked last or in separate equipment	(a)	C/L
Abnormal milk properly handled and disposed of	(b)	5
Proper care of abnormal milk handling equipment	(c)	5

Milking Barn, Stable or Parlor

2. Construction: (Max 5)		
Floors, gutters, and feed troughs of concrete or equally impervious materials; in good repair	(a)	1 L
Walls and ceilings smooth, painted or finished adequately; in good repair; ceiling dust-tight	(b)	1 L
Separate stalls or pens for horses, calves, and bulls; no overcrowding	(c)	1
Adequate natural and/or artificial light; well distributed	(d)	1 L
Properly ventilated	(e)	1
3. Cleanliness: (Max 3)		
Clean and free of litter	(a)	3 L
No swine or fowl	(b)	3 L
4. Cowyard: (Max 3)		
Graded to drain; no pooled water or wastes	(a)	3
Cowyard clean; cattle housing areas & manure packs properly maintained	(b)	3 L
No swine	(c)	3
Manure stored inaccessible to cows	(d)	3

Milkhouse or Room

5. Construction and Facilities: (Max 8)		
Floors (Max 1)		
Smooth; concrete or other impervious material; in good repair	(a)	1 L
Graded to drain	(b)	1 L
Drains trapped, if connected to sanitary system	(c)	1
Walls and Ceilings (Max 1)		
Approved material and finish	(a)	1 L
Good repair (windows, doors, and hoseport included)	(b)	1 L
Lighting and Ventilation (Max 2)		
Adequate natural and/or artificial light; properly distributed	(a)	2 L
Adequate ventilation	(b)	2
Doors and windows closed during dusty weather	(c)	2
Vents and lighting fixtures properly installed	(d)	2 L
Miscellaneous Requirements (Max 2)		
Used for milkhouse operations only; sufficient size	(a)	2 L
No direct opening into living quarters or barn, except as permitted by *Ordinance*	(b)	2 L
Liquid wastes properly disposed of	(c)	2
Proper hoseport where required	(d)	2 L
Acceptable surface under hoseport	(e)	2 L
Suitable shelter for transport truck as required by this *Ordinance*	(f)	2 L

Cleaning Facilities (Max 2)		Debit Value
Two-compartment wash and rinse vat of adequate size	(a)	2 L
Suitable water heating facilities	(b)	2 L
Water under pressure piped to milkhouse	(c)	2 L
6. Cleanliness: (Max 4)		
Floors, walls, windows, tables, and similar non-product contact surfaces clean	(a)	4 L
No trash, unnecessary articles, animals or fowl	(b)	4 L

Toilet and Water Supply

7. Toilet: (Max 4)		
Provided; conveniently located	(a)	4 L
Constructed and operated according to *Ordinance*	(b)	4 L
No evidence of human wastes about premises	(c)	4 L
Toilet room in compliance with *Ordinance*	(d)	4 L
8. Water Supply (Max 2 or 5)		
Last sample date _____		
Constructed and operated according to *Ordinance*	(a)	2 or 5 L
Complies with bacteriological standards	(b)	C/L
No connection between safe and unsafe supplies; no improper submerged inlets	(c)	2/C/L

Utensils and Equipment

9. Construction (Max 4)		
Smooth, impervious, nonabsorbent, safe materials; easily cleanable; seamless hooded pails	(a)	4 L
In good repair; accessible for inspection	(b)	4 L
Approved single-service articles; not reused	(c)	4 L
Utensils and equipment of proper design	(d)	4 L
Approved CIP milk pipeline system	(e)	4 L
10. Cleaning: * (Max 5)		
Utensils and equipment clean	(a)	5/C/L
11. Sanitization: * (Max 5)		
All multi-use containers and equipment subjected to approved sanitization process (See *Ordinance*)	(a)	5/C/L
12. Storage: (Max 2)		
All multi-use containers and equipment properly stored	(a)	2
Stored to assure complete drainage, where applicable	(b)	2
Single-service articles properly stored	(c)	2

Milking

13. Flanks, Udders, and Teats: (Max 5)		
Milking done in barn, stable, or parlor	(a)	5
Brushing completed before milking begun	(b)	5
Flanks, bellies, udders, and tails of cows clean at time of milking; clipped when required	(c)	5
Teats treated with sanitizing solution and dried, just prior to milking	(d)	5
No wet hand milking	(e)	5

Transfer and Protection of Milk

		Debit Value
14. Protection From Contamination: (Max 3)		
No overcrowding	(a)	3
Product and CIP circuits separated	(b)	3
Improperly handled milk discarded	(c)	3
Immediate removal of milk	(d)	3
Milk and equipment properly protected	(e)	3 L
Sanitized milk surfaces not exposed to contamination	(f)	3 L
Air under pressure of proper quality	(g)	3 L
15. Drug & Chemical Control: (Max 2 or 5 or 7)		
Cleaners and sanitizers properly identified	(a)	2 L
Drug administration equipment properly handled and stored	(b)	2 L (Max 2)
Drugs properly labeled (name and address) and stored	(c)	2 L
Drugs properly labeled (directions for use, cautionary statements, active ingredient)	(d)	5 L
Drugs properly used and stored to preclude contamination of milk	(e)	C/L

Personnel

16. Hand-Washing Facilities: (Max 2)		
Proper hand-washing facilities convenient to milking operations	(a)	2 L
Wash and rinse vats not used as hand-washing facilities	(b)	2
17. Personnel Cleanliness: (Max 1)		
Hands washed clean & dried before milking, or performing milk house functions; rewashed when contaminated	(a)	1
Clean outer garments worn	(b)	1

Cooling

18. Cooling: (Max 5)		
Milk cooled to 40° F or less within 2 hours after milking, except as permitted by *Ordinance*	(a)	C/L
Recirculated cooling water from safe source and properly protected; complies with bacteriological standards	(b)	5 L
Last sample date _____		
Temperature recording with 7 day chart	(c)	5 L

Pest Control

19. Insect and Rodent Control: (Max 9)		
Fly breeding minimized by approved manure disposal methods (See *Ordinance*)	(a)	3
Manure packs properly maintained	(b)	3 > 3
All milkhouse openings effectively screened or otherwise protected; doors tight and self-closing; screen doors open outward	(c)	2
Milkhouse free of insects and rodents	(d)	2 > 2 L
Approved pesticides; used properly	(e)	2
Equipment and utensils not exposed to pesticide contamination	(f)	2 > 2
Surroundings neat and clean; free of harborages and breeding areas	(g)	2
Feed storage not attraction for birds, rodents or insects	(h)	2 > 2 L

NOTE: Critical Items Shaded in Gray **** Critical Violation Only If Both Items 10a and 11a Are Cited***

Item numbers correspond to required sanitation items for Grade A raw milk for pasteurization in the Grade A Pasteurized Milk Ordinance--Recommendations of the US Food and Drug Administration and/or in accordance with the Milk and Milk Products Act (chapter 15.36 RCW) and applicable rules adopted thereunder.

October 2003

Chapter 3: Potable Water Systems Requirements

Water systems are regulated by the Washington State Department of Health and Department of Ecology. Maintaining a water system is a constant challenge due to the continual changes as repairs and additions are made to piping and valving schemes.

To avoid violations, frequent checks of the system should be made. This means the producer should become familiar with potential areas of violations. A walk through with the Food Safety Officer is recommended to identify all key components of the system.

The key to answering questions related to water systems lies in knowing exactly what constitutes a cross connection and the requirements for water supply. This can only be addressed through regular inspections of the water system by the dairy producer.

These key areas should be routinely reviewed by the dairy producer to identify possible violations:

- The water supply system shall be constructed and maintained to prevent contamination.
- Cross contamination can occur regardless of whether the system receives water from a groundwater source or a surface water source. Sources of cross contamination are underground water leaks, submerged supply lines, gutters, feces, unsafe water in water troughs, and sanitizer injection pumps.
- Plumbing cross-connections are defined as actual or potential connections between a potable (drinkable) and non-potable water supply. Dairy farm water supplies can become contaminated by storage tanks into water lines.

It is the responsibility of every dairy producer to be familiar with the dangers of cross-connections and to remove them from their dairy farm's water distribution system.

Table A - Water Sampling Schedule

Type of Water System	How often samples are required
Drilled wells, Dug wells, Spring and Surface	Every three years
Recirculating and Reclaim	Every six months
Sandpoint, driven point and buried well seal	Every six months
City water and community water associations	Not needed

Water samples are also needed for new installation or modification of current system.

For additional information refer to PMO appendix D Standards for Water Sources.

Questions & Answers

Q1: **How recent of a water sample will I need when applying for a new license**?
A: A satisfactory water sample test result that is not older than 30 days must be included with the completed application. Applicant is responsible for initial water sampling.

Q2: **Samples are screened for what type of organism?**
A: Testing is completed in search of total coliform levels.

Q3: **Who is responsible for collecting the routine water sample?**
A: Your Food Safety Officer (FSO) will sample as per water sampling schedule. See Table A above.

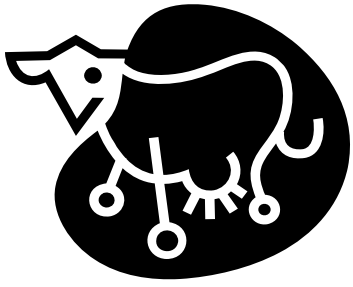
Q4: **Who's responsible for follow up sampling if I have an unsatisfactory water sample result?**
A: It is the responsibility of the producer to see to it that a satisfactory water sample is submitted. Often a field representative from your co-op will do this for you or assist in the completion and submission of the satisfactory water results to the Olympia office.

Q5: **From which outlet can I collect / pull my water sample?**
A: The most frequently used outlet connected to potable water source (e.g., handwash or CIP sink).

Q6: **Where do I take my water sample for testing?**
A: Contact your County Health Department or field / dairy representative (See contacts in the Reference chapter 7).

Q7: **Where can non-potable water be used?**
A: Non-potable water can be used anywhere other than the milkhouse and milking operations (e.g., stock tanks, gutter flush, and wash down of the parlor).

Q8: **Which valves have been approved as backflow prevention devices?**
A: For a current list of acceptable valves contact the Olympia office or FSO.



Chapter 4: Inspections

Although an inspection is cause for concern, it is not a cause for panic. If the dairy producer's standards are consistent with or exceed the regulations, a routine inspection will evolve into a visit to the facility to help identify problems, which will help the dairy producer provide a higher quality product for their customers. Good dairy practices and trained employees should produce satisfactory inspection results and an excellent rapport between the inspector and the milk producer. The receptive and cooperative dairy farmer will discover that the Food Safety Officer (FSO) may be able to offer practical solutions to vexing problems.

Routine inspections of dairy farms are typically conducted not more than every four months and not less than every six months. Farm inspections are normally performed during working daylight hours. Exceptions may include complaint investigations, equipment washing and other potential issues (i.e., evaluation of tanker drivers).

Prior to beginning the inspection, the FSO will make every reasonable attempt to locate the producer and properly identify themselves and the nature of the visit. Every reasonable attempt means looking for the farm operator in the milk house, parlor and /or generally around the outside and inside premises of the milking operation. This does not include the farmhouse, private residences, apartments, other sleeping quarters or remote areas of the farm.

The inspection of a dairy farm includes:

- milkhouse
- milking barn, stable or parlor
- adjacent storage areas
- cowyard and cattle housing areas
- general surroundings to the milkhouse
- waste disposal areas
- water supply and its distribution system
- dairy animal maternity areas
- animal treatment areas or hospital barns
- replacement heifer areas
- offices, utility rooms, tool sheds
- drug cabinets, refrigerators, etc.

Private residences and vehicles are not included without the permission of the owner or their authorized agent.

An inspection report is required to be posted in a conspicuous location. This generally will be in the milkhouse or adjacent areas. Contact the Olympia office if you need to obtain a new copy of your inspection report.

Questions & Answers

Q1: **Can cows which have been treated with antibiotics be milked into the traditional milk bucket?**

A: Yes, if the milk bucket does not draw its vacuum directly from the milk line. The vacuum must come off a separate line. If the milk line is also your vacuum line, this is not acceptable because overflow from the bucket will go directly into the milk line. Ultimately, the safest method is to have separate herds for treated cows and untreated cows. The treated cows should be milked last with the line out of the milk tank or with completely separate equipment.

Q2: **What kinds of pesticides can I use and store in the milkhouse?**

A: Only pesticides with specific directions for use in the milkhouse can be used or stored in the milkhouse. All pesticides must have an EPA registration number on their labels. No pesticide, including automatic intermittent dispensers, can be used during milking time. All milk and milk contact surfaces must be protected during pesticide use.

Q3: **What are the cleaners and sanitizers requirements?**

A: All cleaners and sanitizers must bear a label which provides the product name, chemical description, use directions, precautionary statements, first aid instructions, container storage instructions, and the name and address of the manufacturer. This requirement pertains to the storage container and dedicated end-use containers only and does not generally apply to the transfer buckets, scoops, dippers, etc.

Q4: **Where should I store my milk filters?**

A: Strainer pads, parchment papers, gaskets, and similar single service articles must be protected against contamination and stored in a suitable, tightly sealed container or cabinet.

Q5: **Do I have to sanitize the teats of the cow before I attach the milker unit?**

A: Sanitizing of the teats shall not be required if the udder is dry and the teats have been thoroughly cleaned (not dry wiped) and dried (manually wiped dry) prior to milking. The regulatory agency determines what constitutes a dry udder and cleaned and dried teats.

Q6: **How often do I have to scrape the loafing shed or change cow bedding?**

A**:** Both must occur at a frequency necessary to maintain cleanliness of the facility and the cows.

Q7: **What are the requirements of an adequate hand wash station?**

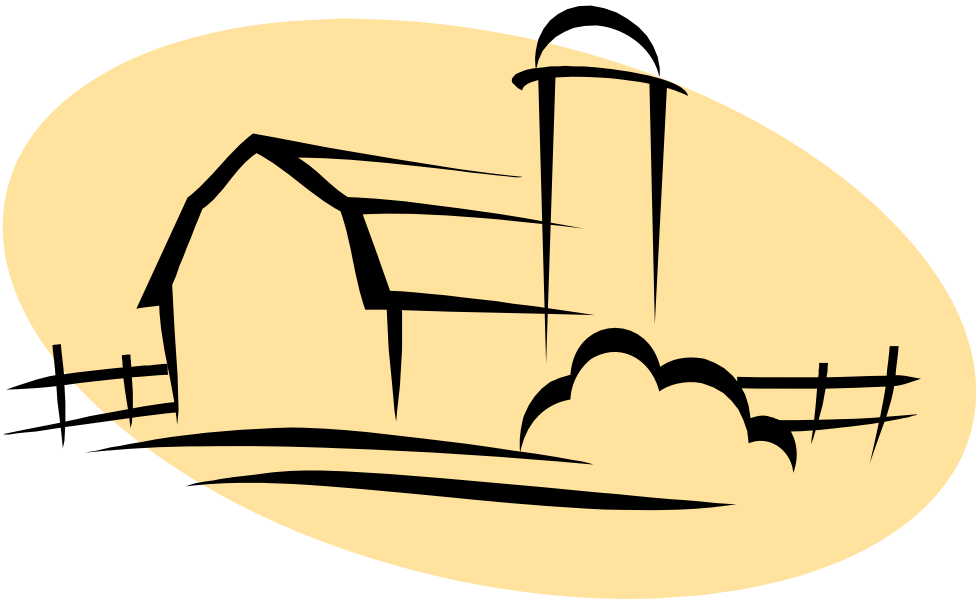
A: The hand wash station must have hot and cold or tempered running water as well as handsoap and single-service towels. It must be convenient to the milkhouse, milking barn, stable, parlor and toilet.

Q8: **What are the toilet room requirements?**

A: Toilet room requirements can be found in the PMO section 7r. If there is access to the residential toilet facilities, then no separate facility is required on the farm. Approved portable toilets are accepted.

Q9: **What should I do if I can not find the answer to my questions in the documents provided in the reference section?**

A: Any additional information may be obtain by contacting your Food Safety Officer for technical assistance.



Chapter 5: Compliance and Enforcement

Whenever possible, the Washington State Department of Agriculture (WSDA) Food Safety Program wishes to work with the food and beverage industry in accomplishing correction of violative conditions. We understand that clean, safe food is as much your goal as it is ours.

The WSDA Food Safety Program issues a Notice of Correction (NOC) for the following non-compliant conditions:

- Failing inspection
- Unsatisfactory water sample test results
- Milk sample results that test positive for antibiotics
- Bacterial or somatic cell counts that exceed state maximum allowance levels.

For habitual, recurring non-compliance with state laws and regulations, WSDA issues violating operations a Notice of Intent to Degrade or Notice of Intent to Revoke License (NOI). The department may also issue Notice of Intent to Assess Civil Penalty as an enforcement action option.

The WSDA Food Safety Program began using a new compliance enforcement system for a dairy farm inspections in 1996. Food Safety Officers score each inspection (except when *critical* violations are cited) based on the number of debit points cited for the *significant* violations. If farms have less than 90 points or if the inspector cites a *critical* violation a NOC letter will be issued.

The relative degree of an establishment's compliance with requirements of applicable laws, rules, and/or regulations will be based on the number and severity of violations noted on the inspection.

For routine inspections (not including Licensing inspections), farms are scored on a 100 point scale with some violations considered CRITICAL.

Critical violations are those violations that:

- Result in product adulteration that could cause injury or illness in consumers; OR
- Have the potential to contribute to conditions resulting in such adulteration.

The point value for each violation is shown on the Criteria and Debit Values sheet (see page 9).

Unless the director determines the risk to public health based on conditions noted at he establishment warrants summary suspension, embargo or other immediate action, a Notice of Correction is always sent to the establishment the first time it is found NOT to be in substantial compliance.

The NOC advises the establishment of the violations, asks it to furnish a written response of its corrective intent and warns that future violations may result in further action by the department, including licensing actions and/or civil penalty assessment.

A reasonable time will be allowed to provide opportunity for correction of the violations. Normally, a 30 day period from the receipt of the NOC is allowed for correction of violations, however the length of time allowed may vary based on the nature of the violation and the circumstances of the violation.

In accordance with chapter 43.05 RCW (Technical Assistance), the time period allowed for correcting the violations may be extended if the firm can show good reason for the extension and the firm requests such an extension in writing in a timely manner.

If upon reinspection, the establishment is found to be in substantial compliance, no further action is initiated by the department.

If upon reinspection, the establishment is found NOT to be in compliance:

- Another Notice of Correction is issued and another reinspection is conducted;

OR

- A Notice of Intent (NOI) to degrade, assess a civil penalty and/or take licensing action is issued.

Whether an NOI is issued depends on the circumstances, including:

- Degree of non-compliance,
- Efforts to correct violations, and
- Past compliance history.

Chapter 6: Farm Biosecurity Procedures

What is farm biosecurity?

Biosecurity refers to protecting the health of livestock by preventing the transmission of disease. Infectious diseases can be spread a number of ways. Some are spread by direct contact between animals, others can be spread by indirect contact, such as by a contaminated water bowl. Still others are spread by the wind, through insect bites, on people's contaminated clothing, in feed or water, or through contact with wildlife, including vermin. As a precaution in the prevention the possible spread of disease between sections of a single site, or between different sites or farms WSDA personnel will practice controls and procedures when performing all routine business. These precautions are intended to prevent WSDA personnel from becoming a vector or carrier of animal diseases, to prevent the spread of animal disease, and to set a good example for stockmen, growers and industry servicemen. If a firm has more restrictive controls, they will follow those in addition to our controls as long as they do not interfere with the performance of assigned duties.

Some of the precautions will include:

1. Maintaining a clean vehicle exterior.
2. Maintaining vehicle interiors clean and equipped with easily removable, rubber floor mats.
3. Arriving with clean outerwear, boots and equipment.
4. Wearing rubber boots or other suitable footwear, which can be cleaned and disinfected prior to departing.
5. Washing hands with soap and water upon arrival and departure.
6. Parking vehicles in the cleanest available area (cement, asphalt, areas without mud or manure).
7. Following a firm's sanitation program for employees.
8. Avoiding direct contact with livestock or pets.
9. Minimizing or avoiding animal housing or feeding areas, corrals, calf pens, hospital pens or special treatment facilities when possible.

Special precautions will be implemented in situations where known or suspected disease outbreaks or more notorious disease conditions exist. This may include the suspension of routine site visits and related duties until the risk becomes manageable.

<u>Moderate risk visitors</u>

People that travel from farm to farm, but have no direct contact with livestock pose a moderate risk for disease transmission. These would include salesmen, feed distributors, farm equipment mechanics, and various types of inspectors.

Recommended Precautions:

- Same precautions as above with additional requirements.
- Clean coveralls should be worn if there is any contact with feed, water, soil samples, manure or farm equipment
- Sampling equipment should be cleaned after each use.

- Soiled coveralls should be removed before entering the vehicle.

High risk visitors

These are visitors that travel from farm to farm and have direct, often intimate contact with livestock. These would include veterinarians, inseminators, processing crews, livestock haulers and neighbors.

Recommended Precautions:

- Same precautions as above with additional recommendations.

For more information on biosecurity you may check the following websites.

- United States Department of Agriculture - http://www.usda.gov
- Food & Drug Administration - http://www.fda.gov
- U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS): http://www.aphis.usda.gov/vs/ceah/cahm/Dairy_Cattle/BAHMBiosecur.pdf
- US Centers for Disease Control (CDC) : www.cdc.gov
- University of California Davis Veterinary Medicine Extension: http://www.vetmed.ucdavis.edu/vetext/INF-DA/INF-DA_Biosecurity.html

Homeland Security

IN CASE OF EMERGENCY OR TO REPORT SUSPICIOUS ACTIVITIES PLEASE CALL WSDA AT 360-902-1876 DURING BUSINESS HOURS OR THE WASHINGTON STATE 24-HOUR ALERT & WARNING CENTER AT 1-800-258-5990.

You are our first line of defense because you take the first step in the emergency response process by making notification to the proper authorities. If you are a private company involved in any aspect of the agriculture industry you should ensure your employee's are aware and trained to recognize malicious intent, and that they understand how to report incidents properly.

For more information on notification response procedures for agricultural food safety and animal health incidents, please contact WSDA at 360-902-1875 or foodsafety@agr.wa.gov and request a copy of the procedures. Information may be reported online at http://www.nwwarn.gov and https://tips.fbi.gov . Additional information on Washington State citizen and business preparedness related to Homeland Security and terrorism can be found at http://emd.wa.gov, and click on the "*Homeland Security*" link.

Chapter 7: IMS Survey and Ratings

Washington participates in a voluntary interstate milk-shipping program. This is called the Interstate Milk Shippers (IMS) program. The IMS program establishes uniform reciprocity between states to prevent unnecessary restrictions of the interstate flow of milk and milk products.

State Rating Officers evaluate sanitation compliance and enforcement actions with the current requirements of the Grade A Pasteurized Milk Ordinance (PMO). The IMS rating officer compiles the scores of a group of farms and assigns a numerical sanitation rating and enforcement rating for the designated area.

Survey procedures

State rating officers will conduct surveys at a minimum of every 2 years. Farms are randomly selected. The total number selected will vary based on the size of the Bulk Tank Unit (BTU). The following is a breakdown of the number of farms surveyed based on the number of farms in the BTU:

Quantity of farms in BTU	Number to be surveyed
1-24	All
25-54	25
55-59	26
60-64	27
65-71	28
72-78	29
79-86	30

Compliance scores are calculated on a weighted average based on the amount of milk produced at each farm. Scores are based on an on site inspection, raw milk sample results and water sample results. A passing score is 90 points. If a BTU fails to score 90 or above, the raw milk is diverted away from Grade A use until a passing survey is completed.

Enforcement scores are a measure of the degree to which enforcement provisions of the *Grade A Pasteurized Milk Ordinance (PMO)* are being applied by the regulatory agency (e.g., inspection frequency, sample frequency for raw milk and water, inspections posted, records being properly maintained, etc.) If the enforcement score is below 90, appropriate action is taken against the receiving milk plant.

In addition to the state survey, the FDA Regional Milk Specialist will conduct a federal check rating every 3 years to asses the overall state procedures with enforcement provisions of the IMS Documents. Passing sanitation scores for these ratings are 80 or above. However, a state rating officer conducts a survey within 90 days if the sanitation score is between 80 and 84.

A survey or rating is not an inspection and no regulatory action is taken against an individual license based on the findings from a survey or rating.

Questions and Answers

Q1: **Will the amount of milk I ship affect the overall score?**
A: Yes. The sanitation is weighted according to the pounds or hundred weight (CWT) units shipped per day. For example, a dairy producer shipping 100,000 pounds per day carries 10 times the weight in the final compliance score compared to a dairy producer shipping 10,000 pounds per day.

Q2: **Who is involved in conducting the survey?**
A: Usually 2 people will be involved in the on-site farm survey. One person is the WSDA Food Safety Officer that routinely inspects your farm. The other person is the state survey officer or the FDA rating officer.

Q3: **Will a report be left?**
A: No. This is not an inspection. Survey findings may be discussed with the survey officer or the regular dairy farm inspector upon completion of the on-site survey or at a later date.

Q4: **When and how will I find out the results of the overall survey?**
A: The completed survey is usually sent to the BTU representative within a week after completion of the record review. Any inquiries should be directed to the BTU representative at that time.

Q5: **Are surveys conducted prior to the 2-year deadline?**
A: Yes. Surveys MUST be completed within the 2-year cycle and may be completed up to 6 months prior to that deadline.

Q6: **What qualifications does a state-rating officer maintain?**
A: The state survey officer is a Washington State Department of Agriculture employee who may also be a Food Safety Officer. The FDA certifies this person every 3 years to conduct state surveys.

Q7: **Is anything covered during a survey / rating not covered during the normal farm inspections?**
A: No. The scope of the survey and rating is the same as a normal farm inspection.

Q8: **If I am part of a BTU, can I also sell my milk to a small cheese processor for additional income?**
A: Yes. However, all milk leaving a NCIMS listed dairy must be tested. This may cause complications and you should work with your FSO and your field representative. Contact the Food Safety Program for more information.

Chapter 8: WSDA Programs and Other References

Livestock Nutrient Management Program

The Washington State Department of Agriculture (WSDA) is the responsible authority under the state Water Pollution Control Act for an effective water quality compliance program for dairies. Over the last 7 years, dairies have become well informed about good management practices to protect the state's surface and ground water and to manage their operations to meet state and federal livestock water quality rules.

The WSDA Livestock Nutrient Management Program's goal is to educate farmers about nutrient management and protecting waters of the state. Storage or application of manure too close to a stream can cause excess nutrients and fecal coliform to get into our water bodies. Proper storage and application of manure following a well-designed nutrient management plan (NMP) can provide an economical source of nutrient for crops, pasture, or hay lands.

Dairies are required to have an NMP to protect water quality from livestock nutrient discharges. Each basic function of the operation, production, collection, storage, transfer, treatment and field application is covered by the plan. The basis for nutrient management is sound agronomic use of solid and liquid manure. The Livestock Nutrient Management Program has inspectors that routinely inspect dairies for compliance with their nutrient management plans and preventing any discharges to surface and ground water.

For more information contact: Livestock Nutrient Management Program, 360-902-1982.

Animal Identification System

Animal Identification is a national program to identify animals and track their movement between premises. The information is used by Animal Health Officials to manage disease. The goal is to be able to identify where affected animals have been within 48 hours of confirmation of a disease outbreak or other animal health event.

WSDA began voluntary Premise Registration in January 2005. Knowing the locations of animal premises is vital to Animal Health Officials when they are managing an incident. A unique premise number is assigned to a location permanently. A premise number may be requested by the landowner, the producer using the land, or the person responsible for the animal operations, e.g., a herd manager. The premise number is assigned by the USDA National Premises Allocator system. Registration is voluntary.

To register a premise, WSDA needs your business name, the name of the location, an address or legal description, contact information (names, phone numbers) for use in an emergency, type of operation, and types of animals. Producers and business operators are responsible for keeping the Contact information up-to-date.

For more information contact: National Animal Identification System, 360-725-5493 or WSDA websitewww.agr.wa.gov and click on "Food & Animals"

References

Washington State Department of Agriculture: www.agr.wa.gov
- Food Safety Program 360-902-1876
- Livestock Nutrient Management Program 360-902-1982
- Organic Program 360-902-1805
- Animal Health Program 360-902-1878
- Feed and Fertilizer 360-902-2027
- Livestock Identification Program 360-902-1855

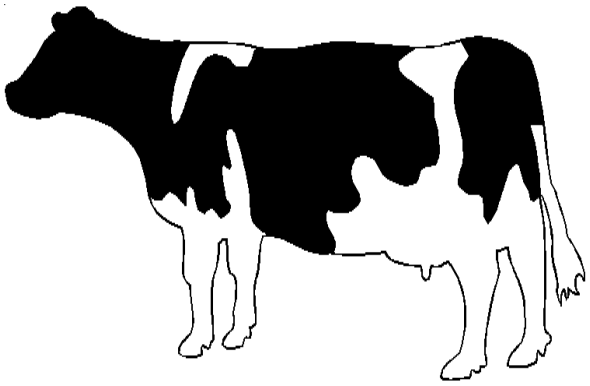
Washington Dairy Products Commission
4201 198th St. SW Ste. 101
Lynnwood, WA 98036
425-672-0687 (FAX) 425-672-0674
E-mail: info@havemilk.org
Home page: www.cowtv.com

Washington State Dairy Goat Council
PO Box 447
Snohomish, WA 98291
425-397-7777 (FAX) 425-742-9276

Washington State Dairy Herd Improvement Association
105 S. Pine Street
Burlington, WA 98233
800-526-2603 (FAX) 360-755-9580

Washington State Dairy Federation
PO Box 1768
Elma, WA 98541
360-785-3485 (FAX) 482-4069
Home page: www.wsdf.org

Milk Market Administrator, USDA
Building J, STE 102; 1930 –220th St SE
Bothell, WA 98021-8471
1-800-852-9557 (FAX)425-487-2775



County Health Districts and Department

Adams County Health District	509-659-3315
Asotin County Health District	509-758-3344
Benton-Franklin Health District	509-943-2614
Chelan-Douglas Health District	509-886-6400
Clallam County Department of Health & Human Services	360-417-2274
Columbia County Public Health District	509-382-2181
Cowlitz County Health Department	360-414-5599
Garfield County Health District	509-843-3412
Grant County Health District	509-754-6060
Grays Harbor County Public Health & Social Services Dept	360-532-8665
Island County Health Department	360-679-7350
Jefferson County Health & Human Services	360-385-9400
Kitsap County Health District	360-337-5235
Kittitas County Health Department	509-962-7515
Klickitat County Health Department	509-773-4565
Lewis County Public Health	360-740-1223
Lincoln County Health District	509-725-1001
Mason County Department of Health Services	360-427-9670
Northeast Tri-County Health District	509-684-1301
Okanogan County Health District	509-422-7140
Pacific County Health and Human Services	360-875-9343
Public Health – Seattle and King County	206-296-4600
San Juan County Dept. of Health & Community Services	360-378-4474
Skagit County Department of Health	360-336-9380
Skamania County Health Department	509-427-5138
Snohomish Health District	425-339-5210
Southwest Washington Health District	360-397-8215
Spokane Regional Health District	509-324-1500
Tacoma-Pierce County Health Department	253-798-6500
Thurston County Public Health & Social Services Dept.	360-786-5581
Wahkiakum County Dept. of Health & Human Services	360-795-6207
Walla Walla County-City Health Department	509-527-3290
Whatcom County Health Department	360-676-6720
Whitman County Health Department	509-397-6280
Yakima Health District	509-575-4040
Washington State Assoc. of Local Public Health Officials	360-753-1886
Central Washington University	509-963-2252
Eastern Washington University	509-359-6496
University of Washington School of Public Health	206-543-1144
University of Washington Environmental Health & Safety	206-543-7262
Washington State University	509-335-3041
Washington State Board of Health	360-236-4100
Washington State Department of Health	360-236-4010

Notes and Records Section

Chapter 15.36 RCW
MILK AND MILK PRODUCTS

(Formerly Fluid Milk)

RCW SECTIONS **Last Update: 7/1/05**

RCW 15.36.002
Intent.

This chapter is intended to enact state legislation that safeguards the public health and promotes public welfare by: (1) Protecting the consuming public from milk or milk products that are: (a) Unsafe; (b) produced under unsanitary conditions; (c) do not meet bacterial standards under the PMO; or (d) below the quality standards under Title 21 C.F.R. or administrative rules and orders adopted under this chapter; and (2) requiring licensing of all aspects of the dairy production and processing industry.

[1994 c 143 § 101.]

RCW 15.36.012
Definitions.

For the purpose of this chapter:

"**Adulterated milk**" means milk that is deemed adulterated under appendix L of the PMO.

"**Colostrum milk**" means milk produced within ten days before or until practically colostrum free after parturition.

"**DMO**" means supplement I, the recommended sanitation ordinance for grade A condensed and dry milk products and condensed and dry whey, to the PMO published by the United States public health service, food and drug administration.

"**Dairy farm**" means a place or premises where one or more cows, goats, or other mammals are kept, a part or all of the milk or milk products from which is sold or offered for sale to a milk processing plant, transfer station, or receiving station.

"**Dairy technician**" means any person who takes samples of milk or cream or fluid derivatives thereof, on which sample tests are to be made as a basis of payment, or who grades, weighs, or measures milk or cream or the fluid derivatives thereof, the grade, weight, or measure to be used as a basis of payment, or who operates equipment wherein milk or products thereof are pasteurized.

"**Degrade**" means the lowering in grade from grade A to grade C.

"**Department**" means the state department of agriculture.

"**Director**" means the director of agriculture of the state of Washington or the director's duly authorized representative.

"**Grade A milk processing plant**" means any milk processing plant that meets all of the standards of the PMO to process grade A pasteurized milk or milk products.

"**Grade A pasteurized milk**" means grade A raw milk that has been pasteurized.

"**Grade A raw milk**" means raw milk produced upon dairy farms conforming with all of the items of sanitation contained in the PMO, in which the bacterial plate count does not exceed twenty thousand per milliliter and the coliform count does not exceed ten per milliliter as determined in accordance with RCW 15.36.201.

"**Grade A raw milk for pasteurization**" means raw milk produced upon dairy farms conforming with all of the same items of sanitation contained in the PMO of grade A raw milk, and the bacterial plate count, as delivered from the farm, does not exceed eighty thousand per milliliter as determined in accordance with RCW 15.36.201.

"**Grade C milk**" is milk that violates any of the requirements for grade A milk but that is not deemed to be adulterated.

"**Milk**" means the lacteal secretion, practically free of colostrum, obtained by the complete milking of one or more healthy cows, goats, or other mammals.

"**Milk hauler**" means a person who transports milk or milk products in bulk to or from a milk processing plant, receiving station, or transfer station.

"**Milk processing**" means the handling, preparing, packaging, or processing of milk in any manner in preparation for sale as food, as defined in chapter 69.04 RCW. Milk processing does not include milking or producing milk on a dairy farm that is shipped to a milk processing plant for further processing.

"**Milk processing plant**" means a place, premises, or establishment where milk or milk products are collected, handled, processed, stored, bottled, pasteurized, aseptically processed, bottled, or prepared for distribution, except an establishment that merely receives the processed milk products and serves them or sells them at retail.

"**Milk products**" means the product of a milk manufacturing process.

"**Misbranded milk**" means milk or milk products that carries a grade label unless such grade label has been awarded by the director and not revoked, or that fails to conform in any other respect with the statements on the label.

"**Official laboratory**" means a biological, chemical, or physical laboratory that is under the direct supervision of the state or a local regulatory agency.

"**Officially designated laboratory**" means a commercial laboratory authorized to do official work by the department, or a milk industry laboratory officially designated by the department for the examination of grade A raw milk for pasteurization and commingled milk tank truck samples of raw milk for antibiotic residues and bacterial limits.

"**PMO**" means the grade "A" pasteurized milk ordinance published by the United States public health service, food and drug administration.

"**Pasteurized**" means the process of heating every particle of milk or milk product in properly designed and operated equipment to the temperature and time standards specified in the PMO.

"**Person**" means an individual, partnership, firm, corporation, company, trustee, or association.

"**Producer**" means a person or organization who operates a dairy farm and provides, sells, or offers milk for sale to a milk processing plant, receiving station, or transfer station.

"**Receiving station**" means a place, premises, or establishment where raw milk is received, collected, handled, stored, or cooled and prepared for further transporting.

"**Sale**" means selling, offering for sale, holding for sale, preparing for sale, trading, bartering, offering a gift as an inducement for sale of, and advertising for sale in any media.

"**Transfer station**" means any place, premises, or establishment where milk or milk products are transferred directly from one milk tank truck to another.

"**Wash station**" means a place, facility, or establishment where milk tanker trucks are cleaned in accordance with the standards of the PMO.

[1999 c 291 § 1; 1995 c 374 § 1; 1994 c 143 § 102; 1989 c 354 § 1; 1961 c 11 § 15.32.010. Prior: 1955 c 238 § 71; prior: (i) 1943 c 90 § 1, part; 1933 c 188 § 1, part; 1929 c 213 § 1, part; 1927 c 192 § 1, part; 1919 c 192 § 1, part; Rem. Supp. 1943 § 6164, part. (ii) 1929 c 213 § 6, part; 1927 c 192 § 16, part; 1921 c 104 § 3, part; 1919 c 192 § 41, part; RRS § 6203, part. Formerly RCW 15.32.010.]

NOTES:

Effective date -- 1995 c 374 §§ 1-47, 50-53, and 59-68: "Sections 1 through 47, 50 through 53, and 59 through 68 of this act are necessary for the immediate preservation of the public peace, health, or safety, or support of the state government and its existing public institutions, and shall take effect June 30, 1995." [1995 c 374 § 81.]

Severability -- 1989 c 354: "If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected." [1989 c 354 § 89.]

RCW 15.36.021
Milk and milk products -- Rule-making authority -- Grade A pasteurized and raw milk -- Grade C milk and milk products.

The director of agriculture is authorized to:

(1) Adopt rules necessary to carry out the purposes of chapter 15.36 RCW, which includes rules governing the farm storage tank and bulk milk tanker requirements, however the rules may not restrict the display or promotion of products covered under this section.

(2) By rule, establish, amend, or both, definitions and standards for milk and milk products. Such definitions and standards established by the director shall conform, insofar as practicable, with the definitions and standards for milk and milk products adopted by the federal food and drug administration.

(3) By rule, adopt the PMO, DMO, and supplemental documents by reference to establish requirements for grade A pasteurized and grade A raw milk.

(4) Adopt rules establishing standards for grade A pasteurized and grade A raw milk that are more stringent than the PMO based upon current industry or public health information for the enforcement of this chapter whenever he or she determines that any such rules are necessary to carry out the purposes of this section and RCW 15.36.481.

(5) By rule, certify an officially designated laboratory to analyze milk for standard of quality, adulteration, contamination, and unwholesomeness.

(6) Adopt rules setting standards and requirements for the production of grade C milk and milk products.

[1999 c 291 § 2; 1996 c 188 § 3; 1994 c 143 § 103; 1989 c 354 § 13; 1969 ex.s. c 102 § 1. Formerly RCW 15.36.011.]
NOTES:
Severability -- 1989 c 354: See note following RCW 15.36.012.
Repealed definitions constitute rules: "The definitions constituting section 15.36.010, chapter 11, Laws of 1961 and RCW 15.36.010 as hereinafter in section 7 of this 1969 amendatory act repealed are hereby constituted and declared to be operative and to remain in force as the rules of the department of agriculture until such time as amended, modified, or revoked by the director of agriculture." [1969 ex.s. c 102 § 2.]

RCW 15.36.025
Application of chapter 34.05 RCW.

Chapter 34.05 RCW governs the rights, remedies, and procedures respecting the administration of this chapter, including rule making, assessment of civil penalties, emergency actions, and license suspension, revocation, or denial.

[1999 c 291 § 3.]

RCW 15.36.041
Milk producer's license.

Every milk producer must obtain a milk producer's license to operate as a milk producer as defined in this chapter. A milk producer's license is not transferable with respect to persons or locations or both. The license, issued by the director upon approval of an application for the license and compliance with the provisions of this chapter, shall contain the license number, name, residence, and place of business, if any, of the licensee.

[1994 c 143 § 202.]

RCW 15.36.051
Milk processing plant license -- Fee waiver.

A milk processing plant must obtain an annual milk processing plant license from the department, which shall expire on June 30 of each year. A milk processing plant may choose to process (1) grade A milk and milk products, or (2) other milk products that are not classified grade A.

Only one license may be required to process milk; however, milk processing plants must obtain the necessary endorsements from the department in order to process products as defined for each type of milk or milk product processing. Application for a license shall be on a form prescribed by the director and accompanied by a fifty-five dollar annual license fee. The applicant shall include on the application the full name of the applicant for the license and the location of the milk processing plant he or she intends to operate and any other necessary information. Upon the approval of the application by the director and compliance with the provisions of this chapter, including the applicable rules adopted under this chapter by the department, the applicant shall be issued a license or a renewal of a license.

Licenses shall be issued to cover only those products, processes, and operations specified in the license application and approved for licensing. If a license holder wishes to engage in processing a type of milk product that is different than the type specified on the application supporting the licensee's existing license and processing that type of food product would require a major addition to or modification of the licensee's processing facilities, the licensee shall submit an amendment to the current license application. In such a case, the licensee may engage in processing the new type of milk product only after the amendment has been approved by the department.

A licensee under this section shall not be required to obtain a food processing plant license under chapter 69.07 RCW to process milk or milk products.

The director shall waive the fee for a food processing license under chapter 69.07 RCW for persons who are also licensed as a milk processing plant.

[2005 c 414 § 1; 1999 c 291 § 4; 1994 c 143 § 203; 1991 c 109 § 2; 1961 c 11 § 15.32.110. Prior: (i) 1927 c 192 § 11; 1923 c 27 § 8; 1919 c 192 § 29; RRS § 6192. (ii) 1919 c 192 § 33; RRS § 6195. Formerly RCW 15.32.110.]
NOTES:
Effective date -- 2005 c 414 §§ 1 and 4: "Sections 1 and 4 of this act are necessary for the immediate preservation of the public peace, health, or safety, or support of the state government and its existing public institutions, and take effect July 1, 2005." [2005 c 414 § 5.]

RCW 15.36.071
Milk hauler's license -- Endorsements.

A milk hauler must obtain a milk hauler's license to conduct the operation under this chapter. A milk hauler's license is not transferable with respect to persons or locations or both. The license, issued by the director upon approval of an application for the license and compliance with the provisions of this chapter, shall contain the license number, name, residence, and place of business, if any, of the licensee. A milk hauler's license shall also contain endorsements for individual milk transport vehicles. The license plate number and registration number for each milk transport vehicle shall be listed on the endorsement.

[1995 c 374 § 2; 1994 c 143 § 205.]
NOTES:
Effective date -- 1995 c 374 §§ 1-47, 50-53, and 59-68: See note following RCW 15.36.012.

RCW 15.36.081
Dairy technician's license -- Application -- Renewal -- Fees.

A dairy technician must obtain a dairy technician's license to conduct operations under this chapter. Such license shall be limited to those functions which the licensee has been found qualified to perform. Before issuing the license the director shall assess the applicant's qualifications and may test the applicant for the functions for which application has been made.

Application for a license as a dairy technician shall be made upon forms provided by the director, and shall be filed with the department. The director may issue a temporary license to the applicant for such period as may be prescribed and stated in the license, not to exceed sixty days, but the license may not be renewed to extend the period beyond sixty days.

The initial application for a dairy technician's license must be accompanied by a license fee of ten dollars. The fee for renewal of the license is five dollars. All dairy technicians' licenses shall expire on December 31 of odd-numbered years.

[1999 c 291 § 5; 1994 c 143 § 206; 1963 c 58 § 6; 1961 c 11 § 15.32.580. Prior: 1943 c 90 § 4; 1927 c 192 § 8; 1923 c 27 § 7; 1919 c 192 § 26; Rem. Supp. 1943 § 6189. Formerly RCW 15.32.580.]

RCW 15.36.091
Dairy technician's license -- Records -- Inspection of.

Licensed dairy technicians shall personally take all samples, conduct all tests, and determine all weights and grades of milk and milk products bought, sold, or delivered upon the basis of weight or grade or on the basis of the milk fat, nonfat milk solids, or other components contained therein. Each licensee shall keep a copy of every original report of each test, weight, or grade made by him or her for a period of two months after making the report. No unfair, fraudulent, or manipulated sample shall be taken or delivered for analysis.

[1994 c 143 § 207; 1963 c 58 § 9; 1961 c 11 § 15.32.590. Prior: 1927 c 192 § 7, part; 1923 c 27 § 6, part; 1919 c 192 § 25, part; RRS § 6188, part. Formerly RCW 15.32.590.]

RCW 15.36.101
Milk wash station license.

A wash station operator must obtain a milk wash station license to conduct the operation under this chapter for all wash stations separate from a milk processing plant. A milk wash station license is not transferable with respect to persons or locations or both. The license, issued by the director upon approval of an application for such license and compliance with the provisions of this chapter, shall contain the license number, name, residence, and place of business, if any, of the licensee.

[1994 c 143 § 208.]

RCW 15.36.111
Inspection of dairy farms and milk processing plants -- Violations -- Director's access.

(1) The director shall inspect all dairy farms and all milk processing plants prior to issuance of a license under this chapter and at a frequency determined by the director by rule: PROVIDED, That the director may accept the results of periodic industry inspections of producer dairies if such inspections have been officially checked periodically and found satisfactory. In case the director discovers the violation of any item of grade requirement, he or she shall make a second inspection after a lapse of such time as he or she deems necessary for the defect to be remedied, but not before the lapse of three days, and the second inspection shall be used in determining compliance with the grade requirements of this chapter. Whenever there is any violation of the same requirement of this chapter on the second inspection, the director may initiate proceedings to degrade, suspend the license, or assess a civil penalty.

(2) One copy of the inspection report detailing the grade requirement violations shall be posted by the director in a conspicuous place upon an inside wall of the milk tank room or a mutually agreed upon location on a dairy farm or given to an operator of the milk processing plant, and said inspection report shall not be defaced or removed by any person except the director. Another copy of the inspection report shall be filed with the records of the director.

(3) Every milk producer and milk processing plant shall permit the director access to all parts of the establishment during the working hours of the producer or milk processing plant, which shall at a

minimum include the hours from 8 a.m. to 5 p.m., and every milk processing plant shall furnish the director, upon his or her request, for official use only, samples of any milk product for laboratory analysis, a true statement of the actual quantities of milk and milk products of each grade purchased and sold, together with a list of all sources, records of inspections and tests, and recording thermometer charts.

[1999 c 291 § 6; 1996 c 189 § 1; 1994 c 143 § 209; 1961 c 11 § 15.36.100. Prior: 1949 c 168 § 5; Rem. Supp. 1949 § 6266-34. Formerly RCW 15.36.100.]
NOTES:
Effective date -- 1996 c 189: "This act is necessary for the immediate preservation of the public peace, health, or safety, or support of the state government and its existing public institutions, and shall take effect immediately [March 28, 1996]." [1996 c 189 § 3.]

RCW 15.36.131
Sale of out-of-state grade A milk and milk products.

Grade A milk and milk products from outside the state may not be sold in the state of Washington unless produced and/or pasteurized under provisions equivalent to the requirements of this chapter and the PMO: PROVIDED, That the director shall satisfy himself or herself that the authority having jurisdiction over the production and processing is properly enforcing such provisions.

[1994 c 143 § 211; 1961 c 11 § 15.36.500. Prior: 1949 c 168 § 11; Rem. Supp. 1949 § 6266-39. Formerly RCW 15.36.500.]

RCW 15.36.141
Grading of milk and milk products.

Grades of milk and milk products as defined in this chapter shall be based on the respectively applicable standards contained in this chapter, with the grading of milk products being identical with the grading of milk, except that bacterial standards are omitted in the case of cultured milk products. Vitamin D milk shall be only of grade A, certified pasteurized, or certified raw quality. The grade of a milk product shall be that of the lowest grade milk or milk product used in its preparation.

[1994 c 143 § 510; 1984 c 226 § 3; 1981 c 297 § 2; 1961 c 11 § 15.36.120. Prior: 1955 c 238 § 12; prior: 1949 c 168 § 7, part; Rem. Supp. 1949 § 6266-36, part. Formerly RCW 15.36.120.]
NOTES:
Severability -- 1981 c 297: See note following RCW 15.36.201.

RCW 15.36.151
Unlawful to sell, offer for sale, or deliver certain products -- Diseased animals -- Colostrum -- Exceptions.
It is unlawful to sell, offer for sale, or deliver:

(1) Milk or products produced from milk from cows, goats, or other mammals affected with disease or of which the owner thereof has refused official examination and tests for disease; or

(2) Colostrum milk for consumption by humans, except that this prohibition regarding colostrum milk does not apply to:

(a) Colostrum milk made or to be made available to persons having multiple sclerosis, or other persons acting on their behalf, who, at the time of the initial sale, present a form, signed by a licensed physician, certifying that the intended user has multiple sclerosis and that the user releases the provider of the milk from liability resulting from the consumption of the milk; or

(b) Colostrum milk processed or to be processed by a licensed food processing facility or a milk processing plant as a nutritional supplement in accordance with the federal dietary supplement health and education act. Colostrum milk used for this purpose must be pasteurized or otherwise subjected to a heat process or other treatment sufficient to kill harmful organisms.

Colostrum milk described in subsection (2)(a) or (b) of this section is exempt from the prohibition provided by subsection (2) of this section if it comes from a licensed producer. Such colostrum milk is also exempt from meeting the standards for grade A raw milk required by this chapter.

[2000 c 97 § 1; 1999 c 291 § 7; 1994 c 143 § 303; 1981 c 321 § 1; 1961 c 11 § 15.32.160. Prior: 1929 c 213 § 9; 1919 c 192 § 49; RRS § 6211. Formerly RCW 15.32.160.]

RCW 15.36.161
Cows, goats, and other mammals -- Animal health requirements.

(1) All milking cows, goats, and other mammals must meet the animal health requirements established by the state veterinarian under the authority of chapter 16.36 RCW.

(2) Milk or milk products from cows, goats, and other mammals intended for consumption in the raw state must be from a herd which is tested negative within the previous twelve months for brucellosis, tuberculosis, and any other disease the director may designate by rule. Additions to the herd must be tested negative for the diseases within the previous thirty days before introduction into the herd. The state veterinarian shall direct all testing procedures in accordance with state and national standards for animal disease eradication.

(3) Cows, goats, and other mammals showing chronic mastitis, whether producing abnormal milk or not, shall be permanently excluded from the milking herd. Cows, goats, and other mammals producing bloody, stringy, or otherwise abnormal milk, but with only slight inflammation of the udder shall be excluded from the herd until reexamination shows that the milk has become normal.

[1999 c 291 § 8; 1982 c 131 § 2; 1961 c 11 § 15.36.150. Prior: 1955 c 238 § 15; prior: 1949 c 168 § 7, part; Rem. Supp. 1949 § 6266-36, part. Formerly RCW 15.36.150.]

RCW 15.36.171
Grades of milk and milk products that may be sold.

The director may revoke the license of any milk processing plant or producer whose product fails to qualify as grade A pasteurized or grade A raw, or in lieu thereof may degrade the product to grade C and permit its sale as other than fluid milk or grade A milk products during a period not exceeding thirty days. In the event of an emergency, the director may permit the sale of grade C milk for more than thirty days.

[1999 c 291 § 9; 1995 c 374 § 3; 1994 c 143 § 301; 1989 c 354 § 22; 1961 c 11 § 15.36.470. Prior: 1949 c 168 § 8; Rem. Supp. 1949 § 6266-37. Formerly RCW 15.36.470.]
NOTES:
Effective date -- 1995 c 374 §§ 1-47, 50-53, and 59-68: See note following RCW 15.36.012.
Severability -- 1989 c 354: See note following RCW 15.36.012.

RCW 15.36.181
Sale of adulterated or misbranded milk or milk products prohibited -- Possession restricted.

No person shall produce, sell, offer, or expose for sale, or have in possession with intent to sell, any milk or milk product which is adulterated or misbranded. It is unlawful for any person, elsewhere than in a private home, to have in possession any adulterated or misbranded milk or milk products. Adulterated or misbranded milk or milk products may be impounded and disposed of by the director.

[1999 c 291 § 10; 1994 c 143 § 302; 1961 c 11 § 15.36.070. Prior: 1949 c 168 § 2; Rem. Supp. 1949 § 6266-31. Formerly RCW 15.36.070.]

RCW 15.36.191
Milk or milk product analysis -- Report of violative results.

After obtaining a sample of milk or milk product for analysis, the department shall, within ten days of obtaining the result of the analysis, send any violative results to the person from whom the sample was taken or to the person responsible for the condition of the milk.

[1999 c 291 § 11; 1994 c 143 § 304; 1989 c 354 § 11; 1961 c 11 § 15.32.530. Prior: 1907 c 234 § 12; RRS § 6278. Formerly RCW 15.32.530.]
NOTES:

Severability -- 1989 c 354: See note following RCW 15.36.012.

RCW 15.36.201
Examination of milk and milk products -- Violations -- Director's options.

(1) During any consecutive six months at least four samples of raw milk, raw milk for pasteurization, or both, from each dairy farm and raw milk for pasteurization, after receipt by the milk processing plant and prior to pasteurization, heat-treated milk products, and pasteurized milk and milk products from each grade A milk processing plant, for purposes of compliance with the PMO, shall be collected in at least four separate months and examined in an official laboratory: PROVIDED, That in the case of raw milk for pasteurization the director may accept the results of an officially designated laboratory.

(2) If two of the last four consecutive bacterial counts, somatic cell counts, coliform determinations, or cooling temperatures, taken on separate days, exceed the standard for milk or milk products established in this chapter and rules adopted under this chapter, the director shall send written notice thereof to the person concerned. This notice shall remain in effect so long as two of the last four consecutive samples exceed the limit of the same standard. An additional sample shall be taken after sending of the notice, but not before the lapse of three days. The director may initiate proceedings to degrade or suspend the milk producer's license or milk processing plant license or assess a civil penalty whenever the standard is again violated so that three of the last five consecutive samples exceed the limit of the same standard.

[1999 c 291 § 12. Prior: 1994 c 143 § 401; 1994 c 46 § 11; 1989 c 354 § 17; 1981 c 297 § 1; 1961 c 11 § 15.36.110; prior: 1955 c 238 § 10; 1949 c 168 § 6; Rem. Supp. 1949 § 6266-35. Formerly RCW 15.36.110.]
NOTES:
Effective date -- 1994 c 46: See note following RCW 15.58.070.
Severability -- 1989 c 354: See note following RCW 15.36.012.
Severability -- 1981 c 297: "If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected." [1981 c 297 § 43.]

RCW 15.36.206
Source of milk and milk products -- Seller's disclosure.

Any person selling milk or milk products shall furnish the director, upon request, with the name of all milk processing plants or distributors from whom their milk and milk products are obtained.

[1999 c 291 § 13.]

RCW 15.36.221
Grade A raw milk -- Cooling.

Milk and milk products for consumption in the raw state or for pasteurization shall be cooled within two hours of completion of milking to forty degrees Fahrenheit or less and maintained at that temperature until picked up, in accordance with RCW 15.36.201, so long as the blend temperature after the first and following milkings does not exceed fifty degrees Fahrenheit.

[1995 c 374 § 4; 1984 c 226 § 5; 1961 c 11 § 15.36.260. Prior: 1955 c 238 § 37; prior: 1949 c 168 § 7, part; Rem. Supp. 1949 § 6266-36, part. Formerly RCW 15.36.260.]
NOTES:
Effective date -- 1995 c 374 §§ 1-47, 50-53, and 59-68: See note following RCW 15.36.012.

RCW 15.36.231
Raw milk or milk products -- Bottling and capping -- Packaging -- Labeling.

(1) Milk and milk products for consumption in the raw state shall be bottled or packaged on the farm where produced. Bottling and capping shall be done in a sanitary manner by means of approved equipment and operations. Caps or cap stock shall be purchased in sanitary containers and kept therein in a clean dry place until used.

(2) All containers enclosing raw milk or any raw milk product shall be plainly labeled or marked with the word "raw" and the name of the producer or packager. The label or mark shall be in letters of a size, kind, and color approved by the director and shall contain no marks or words which are misleading.

[2005 c 414 § 2; 1999 c 291 § 14; 1961 c 11 §15.36.265 . Prior: 1955 c 238 § 38; prior: 1949 c 168 § 7, part; Rem. Supp. 1949 § 6266-36, part. Formerly RCW 15.36.265.]

RCW 15.36.241
Capping of milk or milk products.

Capping of milk or milk products shall be done in a sanitary manner by means of approved equipment and operations. The cap or cover shall cover the pouring lip to at least its largest diameter.

[2005 c 414 § 3; 1961 c 11 § 15.36.420. Prior: 1955 c 238 § 64; prior: 1949 c 168 § 7, part; Rem. Supp. 1949 § 6266-36, part. Formerly RCW 15.36.420.]

RCW 15.36.261
Butter or cheese -- Pasteurization of milk or cream.

All milk or cream used in the manufacture of pasteurized butter or cheese shall be pasteurized only in the plant where the butter or cheese is manufactured.

[1961 c 11 § 15.32.410. Prior: 1919 c 192 § 12; RRS § 6175. Formerly RCW 15.32.410.]

RCW 15.36.271
"Pasteurized" -- Use of word regulated.

No person shall use the word "pasteurized" in connection with the sale, designation, advertising, labeling, or billing of milk, cream, or any milk product unless the same and all milk products used in the manufacture thereof consist exclusively of milk, skimmed milk, or cream that has been pasteurized in its final form.

[1989 c 354 § 7; 1961 c 11 § 15.32.420. Prior: 1919 c 192 § 71; RRS § 6233. Formerly RCW 15.32.420.]
NOTES:
Severability -- 1989 c 354: See note following RCW 15.36.012.

RCW 15.36.281
Unlawful use of containers -- Seizure authorized.

(1) It shall be unlawful for a person other than the owner, to possess for sale or barter or to use a container that is used to distribute packaged milk or milk products and that bears the name or trademark of an owner that has been properly registered.

(2) A person receiving packaged dairy products in containers bearing the registered name or trademark of the owner shall return the containers to the owner.

(3) When such a container is in the possession of a person other than the owner, the director may seize and hold it until it is established to the director's satisfaction that such possession is lawful. The director may seize such containers and return them to the owner, in which case the owner shall pay the expenses thereof. Neither the director nor a person who returns such containers shall be liable for containers lost in transportation.

[1994 c 143 § 508; 1961 c 11 § 15.32.450. Prior: (i) 1927 c 192 § 22, part; 1923 c 27 § 12, part; 1919 c 192 § 86, part; 1915 c 101 § 1, part; RRS § 6259, part. (ii) 1915 c 101 § 3; RRS § 6261. (iii) 1927 c 192 § 22a; 1915 c 101 § 4; RRS § 6262. (iv) 1927 c 192 § 22b; 1915 c 101 § 5; RRS § 6263. Formerly RCW 15.32.450.]

RCW 15.36.401
Licenses -- Denial, suspension, revocation -- Reasons.

(1) A license issued under this chapter may be denied, suspended, or revoked by the director when a person:

(a) Fails to comply with the provisions of this chapter or the rules adopted under this chapter;

(b) Refuses the department access to a portion or area of a facility regulated under this chapter, for the purpose of carrying out the provisions of this chapter;

(c) Fails to comply with an order of the director;

(d) Refuses to make available to the department records required to be kept under the provisions of this chapter;

(e) Fails to comply with the applicable provisions of chapter 69.04 RCW, Washington intrastate commerce in food, drugs, and cosmetics act, or rules adopted under that chapter;

(f) Interferes with the director in the performance of his or her duties; or

(g) Exhibits negligence, misconduct, or lack of qualification in the discharge of his or her functions.

Upon notice by the director to deny, revoke, or suspend a license, a person may request a hearing under chapter 34.05 RCW.

(2) Whenever a milk transport vehicle is found in violation of this chapter or rules adopted under this chapter, the endorsement for that milk transport vehicle contained on a milk hauler's license may be suspended or revoked. The suspension or revocation does not apply to any other milk transport vehicle operated by the milk hauler.

(3) A license may be revoked by the director upon serious or repeated violations or after a license suspension or degrade for thirty continuous days without correction of the items causing the suspension or degrade.

[1999 c 291 § 15; 1994 c 143 § 501.]

RCW 15.36.421
Milk processing plant or producer -- License suspension.

(1) If the director finds a milk processing plant or producer operating under conditions that constitute an immediate danger to public health, safety, or welfare or if the licensee or an employee of the licensee actively prevents the director or the director's representative, during an on-site inspection, from determining whether such a condition exists, the director may summarily suspend a license provided for in this chapter.

(2) If a license is summarily suspended, the holder of the license shall be notified in writing that the license is, upon service of the notice, immediately suspended and that prompt opportunity for a hearing will be provided.

(3) If a license is summarily suspended, processing and shipping operations shall immediately cease. However, the director may reinstate the license if the condition that caused the suspension has been abated to the director's satisfaction.

[1999 c 291 § 16; 1994 c 143 § 503.]

RCW 15.36.451
Regrading of milk or milk products -- Reinstatement of license.

Any producer or milk processing plant whose milk has been degraded by the director, or whose license has been suspended may at any time make application for the regrading of his or her products or the reinstatement of his or her license.

Upon receipt of a satisfactory application, in case the lowered grade or the license suspension was the result of violation of the bacteriological or cooling temperature standards, the director shall take further samples of the applicant's output, at a rate of not more than two samples per week. The director

shall regrade the milk or milk products upward or reinstate the license on compliance with grade requirements as determined in accordance with the provisions of RCW 15.36.201.

In case the lowered grade of the applicant's product or the license suspension was due to a violation of an item other than bacteriological standard or cooling temperature, the said application must be accompanied by a statement signed by the applicant to the effect that the violated item of the specifications had been conformed with. Within one week of the receipt of such an application and statement the director shall make a reinspection of the applicant's establishment and thereafter as many additional reinspections as he or she may deem necessary to assure himself or herself that the applicant is again complying with the higher grade requirements. The higher grade or license shall be reinstated upon confirmation that all violated items are corrected and any period for reduction in grade or license suspensions as ordered by the director has been completed.

[1999 c 291 § 17; 1996 c 189 § 2; 1994 c 143 § 506; 1961 c 11 § 15.36.480. Prior: 1949 c 168 § 9; Rem. Supp. 1949 § 6266-37a. Formerly RCW 15.36.480.]
NOTES:
Effective date -- 1996 c 189: See note following RCW 15.36.111.

RCW 15.36.454
Failure to comply with chapter or rules -- Civil penalties.

(1) Except as provided in RCW 15.36.471 or subsection (2) or (3) of this section, any person who fails to comply with this chapter or the rules adopted under this chapter may be subject to a civil penalty in an amount of not more than one thousand dollars per violation per day.

(2) The director shall adopt rules establishing civil penalties assessed under RCW 15.36.111(1) and 15.36.201(2). The penalties shall be equitably based on the volume of milk or milk product handled by the producer or milk processor subject to the penalty.

(3) Whenever the results of an antibiotic, pesticide, or other drug residue test on a producer's milk are above the actionable level established in the PMO, the producer is subject to a civil penalty in an amount equal to one-half the value of the sum of the volumes of milk produced on the day prior to and the day of the adulteration. The value of the milk shall be computed using the weighted average price for the federal market order under which the milk is delivered.

(4) Each violation is a separate and distinct offense. The director shall impose the civil penalty in accordance with chapter 34.05 RCW. Moneys collected under this section and RCW 15.36.471 shall be remitted to the department and deposited into the revolving fund of the Washington state dairy products commission.

[1999 c 291 § 18.]

RCW 15.36.457
Authority to assess civil penalty.

The authority to assess a civil penalty under RCW 15.36.111(1) and 15.36.201(2) shall be used only as consistent with the 1995 grade A pasteurized milk ordinance published by the United States public health service, food and drug administration and adopted by [the] department in WAC 16-101-700, or any subsequent version as adopted by the department under the authority of RCW 15.36.021(3).

[1999 c 291 § 19.]

RCW 15.36.471
Component parts of fluid dairy products -- Violations of standards -- Civil penalty -- Investigation.

(1) The director shall adopt rules imposing a civil penalty of not more than ten thousand dollars for violations of the standards for component parts of fluid dairy products which are established under this chapter or adopted pursuant to RCW 69.04.398.

(2) In case of a violation of the standards for the composition of milk products, an investigation shall be made to determine the cause of the violation which shall be corrected. Additional samples shall be taken as soon as possible and tested by the department.

[1999 c 291 § 20; 1994 c 143 § 511; 1993 c 212 § 3; 1989 c 175 § 49; 1986 c 203 § 19. Formerly RCW 15.36.595.]
NOTES:
Effective date -- 1989 c 175: See note following RCW 34.05.010.
Severability -- 1986 c 203: See note following RCW 15.17.230.

RCW 15.36.475
Laboratory tests -- Admission as evidence.

Tests performed by an official laboratory or an officially designated laboratory of a milk sample drawn by a department official or a licensed dairy technician shall be admitted as prima facie evidence of a violation in any proceeding to enforce this chapter.

[1999 c 291 § 21.]

RCW 15.36.481
Violations may be enjoined.

The director may bring an action to enjoin the violation of any provision of this chapter or any rule adopted under this chapter in the superior court of the county in which the defendant resides or maintains his or her principal place of business or Thurston county.

[1999 c 291 § 22; 1969 ex.s. c 102 § 4. Formerly RCW 15.36.600.]

RCW 15.36.491
Licenses -- Money deposited in general fund -- Exception.

All moneys received for licenses under this chapter shall be deposited in the general fund, except that all moneys received for annual milk processing plant licenses under RCW 15.36.051 shall be deposited in the agricultural local fund established under RCW 43.23.230.

[2005 c 414 § 4; 1999 c 291 § 23; 1961 c 11 § 15.32.710. Prior: 1899 c 43 § 27; RRS § 6249. Formerly RCW 15.32.710.]
NOTES:
Effective date -- 2005 c 414 §§ 1 and 4: See note following RCW 15.36.051.

RCW 15.36.511
Unlawful actions.
It is unlawful for any person to:

(1) Interfere with or obstruct any person in the performance of official duties under this chapter;

(2) Employ a tester, sampler, weigher, grader, or pasteurizer who is not licensed as a dairy technician;

(3) Alter or tamper with a seal placed by the director; or

(4) Alter or tamper with a sample of milk or milk products taken or sealed by the director.

Except as provided under *RCW 15.35.131, it is unlawful for a milk processing plant to accept milk from a person not licensed as a producer or milk processor.

[1999 c 291 § 24; 1961 c 11 § 15.32.730. Prior: 1919 c 192 § 76; RRS § 6238. Formerly RCW 15.32.730.]
NOTES:
*Reviser's note: The reference to RCW 15.35.131 is erroneous. RCW 15.36.131 was apparently intended.

RCW 15.36.525
Sanitary certificates -- Rules -- Fee for issuance.

The department may issue sanitary certificates to milk processing plants under this chapter subject to such requirements as it may establish by rule. The fee for issuance is fifty dollars per certificate. Fees collected under this section shall be deposited in the agricultural local fund.

[1999 c 291 § 25.]

RCW 15.36.531
Declaration of police power.

It is hereby declared that this chapter is enacted as an exercise of the police power of the state of Washington for the preservation of the public health and each and every section thereof shall be construed as having been intended to effect such purpose and not as having been intended to affect any regulation or restraint of commerce between the several states which may by the Constitution of the United States of America have been reserved to the congress thereof.

[1961 c 11 § 15.32.900. Prior: 1919 c 192 § 83; RRS § 6245. Formerly RCW 15.32.900.]

RCW 15.36.541
Chapter cumulative.

Nothing in this chapter shall be construed as affecting or being intended to effect a repeal of chapter 69.04 RCW or RCW 69.40.010 through 69.40.025, or of any of such sections, or of any part or provision of any such sections, and if any section or part of a section in this chapter shall be found to contain, cover or effect any matter, topic or thing which is also contained in, covered in or effected by said sections, or by any of them, or by any part thereof, the prohibitions, mandates, directions, and regulations hereof, and the penalties, powers and duties herein prescribed shall be construed to be additional to those prescribed in such sections and not in substitution therefor. And nothing in this chapter shall be construed to forbid the importation, transportation, manufacture, sale, or possession of any article of food which is not prohibited from interstate commerce by the laws of the United States or rules or regulations lawfully made thereunder, if there be a standard of quality, purity and strength therefor authorized by any law of this state, and such article comply therewith and be not misbranded.

[1961 c 11 § 15.32.910. Prior: 1919 c 192 § 88; RRS § 6266. Formerly RCW 15.32.910.]

RCW 15.36.551
Dairy inspection program -- Assessment. (Expires June 30, 2010.)

There is levied on all milk processed in this state an assessment not to exceed fifty-four one-hundredths of one cent per hundredweight. The director shall determine, by rule, an assessment, that with contribution from the general fund, will support an inspection program to maintain compliance with the provisions of the pasteurized milk ordinance of the national conference on interstate milk shipment. All assessments shall be levied on the operator of the first milk processing plant receiving the milk for processing. This shall include milk processing plants that produce their own milk for processing and milk processing plants that receive milk from other sources. Milk processing plants whose monthly assessment for receipt of milk totals less than twenty dollars in any given month are exempted from paying this assessment for that month. All moneys collected under this section shall be paid to the director by the twentieth day of the succeeding month for the previous month's assessments. The director shall deposit the funds into the dairy inspection account hereby created within the agricultural local fund established in RCW 43.23.230. The funds shall be used only to provide inspection services to the dairy industry. If the operator of a milk processing plant fails to remit any assessments, that sum shall be a lien on any property owned by him or her, and shall be reported by the director and collected in the manner and with the same priority over other creditors as prescribed for the collection of delinquent taxes under chapters 84.60 and 84.64 RCW.

This section expires June 30, 2010.

[2004 c 132 § 1; 1999 c 291 § 26; 1995 c 15 § 1; 1994 c 34 § 1; 1993 sp.s. c 19 § 1; 1992 c 160 § 1. Formerly RCW 15.36.105.]

NOTES:

Effective date -- 1995 c 15: "This act is necessary for the immediate preservation of the public peace, health, or safety, or support of the state government and its existing public institutions, and shall take effect immediately [April 12, 1995]." [1995 c 15 § 2.]

RCW 15.36.561
Dairy inspection program -- Advisory committee -- Purpose -- Terms.

(1) There is created a dairy inspection program advisory committee. The committee shall consist of eleven members appointed by the director. The director shall solicit nominations for members of the committee from Washington dairy producer organizations and milk processors. The committee shall consist of four members who are producers or their representatives, four members who are milk processors or their representatives, one member who is a producer processor, one member who is a milk hauler, and one member who is a milk equipment dealer.

(2) The purpose of this advisory committee is to advise the director in the administration of the dairy inspection program and regarding policy issues related to this chapter.

(3) The terms of the members of the committee shall be staggered and the members shall serve a term of three years until their successor has been appointed and qualified. In the event a committee member resigns, is disqualified, or vacates a position on the committee for any reason the vacancy may be filled by the director under the provisions of this section governing appointments. The director may remove a member for cause.

(4) The committee shall elect one of its members as chair. The committee shall meet by the call of the director, chair, or a majority of the committee. Members of the committee shall serve without compensation.

[1999 c 291 § 27; 1994 c 143 § 507; 1994 c 34 § 2; 1992 c 160 § 2. Formerly RCW 15.36.107.]

Chapter 16-101 WAC
MILK AND MILK PRODUCTS

WAC

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

16-101-001 Promulgation. [Order 1132, § 16-101-001, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-010 Milk. [Order 1132, § 16-101-010, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-020 Goat milk. [Order 1132, § 16-101-020, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-030 Cream or coffee cream. [Order 1132, § 16-101-030, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-040 Whipping cream. [Order 1132, § 16-101-040, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-050 Whipped cream. [Order 1132, § 16-101-050, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-060 Whipped coffee cream. [Order 1132, § 16-101-060, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-070 Sour cream or cultured sour cream. [Order 1132, § 16-101-070, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-080 Half-and-half. [Order 1132, § 16-101-080, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-090 Sour half-and-half or cultured half-and-half. [Order 1132, § 16-101-090, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-100 Reconstituted or recombined milk and milk products. [Order 1132, § 16-101-100, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-110 Concentrated milk. [Order 1132, § 16-101-110, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-120 Concentrated milk products. [Order 1132, § 16-101-120, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-130 Nonfat milk. [Order 1132, § 16-101-130, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-140 Skim milk. [Order 1132, § 16-101-140, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-150 Lowfat milk. [Order 1132, § 16-101-150, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-160 Vitamin D milk and milk products. [Order 1132, § 16-101-160, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-170 Fortified milk and milk products. [Order 1132, § 16-101-170, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-180 Homogenized milk. [Order 1132, § 16-101-180, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-190 Flavored milk or milk products. [Order 1132, § 16-101-190, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-200 Buttermilk. [Order 1132, § 16-101-200, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-210 Cultured buttermilk. [Order 1132, § 16-101-210, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-220 Cultured milk or cultured whole milk buttermilk. [Order 1132, § 16-101-220, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-230 Eggnog. [Order 1132, § 16-101-230, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-240 Eggnog flavored milk. [Order 1132, § 16-101-240, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-250 Yogurt. [Order 1132, § 16-101-250, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-260 Low fat yogurt. [Order 1132, § 16-101-260, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-270 Nonfat yogurt. [Order 1132, § 16-101-270, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-280 Milk products. [Order 1132, § 16-101-280, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-290 Grade A dry milk products. [Order 1132, § 16-101-290, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-300 Optional ingredients. [Order 1132, § 16-101-300, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-310 Misbranded milk and milk products. [Order 1132, § 16-101-310, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-320 Pasteurization. [Order 1132, § 16-101-320, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-330 Fluid milk products. [Order 1132, § 16-101-330, filed 12/19/69, effective 1/20/70.] Repealed by Order 1401, filed 6/19/75 and 6/20/75.

16-101-400 Promulgation. [Order 1401, § 16-101-400, filed 6/19/75 and 6/20/75.] Repealed by 80-06-125 (Order 1706), filed 6/2/80. Statutory Authority: Chapter 15.36 RCW.

16-101-410 Milk. [Order 1401, § 16-101-410, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-420 Pasteurized milk. [Order 1401, § 16-101-420, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-430 Homogenized milk. [Order 1401, § 16-101-430, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-440 Vitamin D milk. [Order 1401, § 16-101-440, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-450 Vitamin A milk. [Order 1401, § 16-101-450, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed

9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-455 Multivitamin fortified or multimineral fortified milk or milk products. [Statutory Authority: Chapters 15.32 and 15.36 RCW. 87-12-026 (Order 1931), § 16-101-455, filed 5/29/87.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-460 Vitamin A lowfat milk. [Order 1401, § 16-101-460, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-465 Lowfat milk with calcium added. [Statutory Authority: Chapters 15.32 and 15.36 RCW. 87-12-026 (Order 1931), § 16-101-465, filed 5/29/87.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-470 Nonfat milk (skim milk). [Order 1401, § 16-101-470, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-475 Nonfat (skim) milk with calcium added. [Statutory Authority: Chapters 15.32 and 15.36 RCW. 87-12-026 (Order 1931), § 16-101-475, filed 5/29/87.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-480 Vitamin A nonfat milk (skim milk). [Order 1401, § 16-101-480, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-490 Reconstituted or recombined milk or milk products. [Order 1401, § 16-101-490, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-500 Evaporated milk. [Order 1401, § 16-101-500, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-510 Concentrated milk and concentrated milk products. [Order 1401, § 16-101-510, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-520 Half-and-half. [Order 1401, § 16-101-520, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-530 Cream or whipped light cream. [Order 1401, § 16-101-530, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-540 Whipping cream or whipped cream. [Order 1401, § 16-101-540, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-550 Buttermilk or cultured buttermilk. [Order 1401, § 16-101-550, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-560 Sour cream or cultured sour cream. [Order 1401, § 16-101-560, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-570 Sour half-and-half or cultured half-and-half. [Statutory Authority: Chapter 15.32 RCW. 87-09-033 (Order 1925), § 16-101-570, filed 4/10/87; Order 1401, § 16-101-570, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-580 Yogurt. [Order 1401, § 16-101-580, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-590 Chocolate milk. [Order 1401, § 16-101-590, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-600 Chocolate lowfat milk or chocolate nonfat milk. [Order 1401, § 16-101-600, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-610 Flavored milk. [Order 1401, § 16-101-610, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-620 Flavored lowfat milk. [Order 1401, § 16-101-620, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-630 Flavored nonfat milk (flavored skim milk). [Order 1401, § 16-101-630, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-640 Eggnog flavored milk or eggnog. [Order 1401, § 16-101-640, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-650 Optional ingredients. [Order 1401, § 16-101-650, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-660 Protein fortified fluid milk products. [Order 1401, § 16-101-660, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-670 Acidified milk and milk products. [Order 1401, § 16-101-670, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-680 Pasteurization. [Order 1401, § 16-101-680, filed 6/19/75 and 6/20/75.] Repealed by 96-18-108, filed 9/4/96, effective 10/5/96. Statutory Authority: Chapter 15.36 RCW.

16-101-690 Civil penalties—Substandard products. [Statutory Authority: Chapter 15.36 RCW. 87-08-038 (Order 1920), § 16-101-690, filed 3/30/87, effective 7/1/87.] Repealed by 99-18-030, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-101-710 Suspension of Grade A permit. [Statutory Authority: Chapter 15.36 RCW. 80-06-125 (Order 1706), § 16-101-710, filed 6/2/80.] Repealed by 84-18-055 (Order 1840), filed 9/5/84. Statutory Authority: Chapter 15.36 RCW.

16-101-715 Aseptically processed milk and milk products. [Statutory Authority: Chapter 15.36 RCW. 82-14-014 (Order 1766), § 16-101-715, filed 6/28/82.] Repealed by 96-22-059, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.021(3).

16-101-720 Aseptic processing. [Statutory Authority: Chapter 15.36 RCW. 82-14-014 (Order 1766), § 16-101-720, filed 6/28/82.] Repealed by 96-22-059, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.021(3).

16-101-725 Labeling. [Statutory Authority: Chapter 15.36 RCW. 82-14-014 (Order 1766), § 16-101-725, filed 6/28/82.] Repealed by 96-22-059, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.021(3).

16-101-730 Aseptically processed milk—Suspension of Grade A permit. [Statutory Authority: Chapter 15.36 RCW. 82-14-014 (Order 1766), § 16-101-730, filed 6/28/82.] Repealed by 96-22-059, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.021(3).

16-101-735 Processing. [Statutory Authority: Chapter 15.36 RCW. 82-14-014 (Order 1766), § 16-101-735, filed 6/28/82.] Repealed by 96-22-059, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.021(3).

16-101-740 Sanitation requirements. [Statutory Authority: Chapter 15.36 RCW. 82-14-014 (Order 1766), § 16-101-740, filed 6/28/82.] Repealed by 96-22-059, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.021(3).

WAC 16-101-700 Adoption of the pasteurized milk ordinance as the standard for production of milk and milk products. The Grade "A" Pasteurized Milk Ordinance 1995 Recommendation of the United States Public Health Service/Food and Drug Administration is adopted by reference as additional Washington state standards for the production of milk and milk products under chapter 15.36 RCW with the exception of the following portions.

(a) Part 1. Grade A Pasteurized Milk Ordinance:

(i) Section 3, Permits, paragraphs 3 and 4, page 8.

(ii) Section 7. Table 1, line 1, Temperature. . . . Cooled to 7°C (45°F) or less within two hours after milking, provided that the blend temperature after the first and subsequent milkings does not exceed 10°C (50°F); line 2, Bacterial Limits. . . . Individual producer milk not to exceed 100,000 per ml prior to commingling with other producer milk, page 14.

(iii) Item 19r Cooling, page 19.

(b) Part II. Administrative Procedures:

(i) Section 3, Permits, paragraphs 3 and 4, page 38.

(ii) Section 7. Table 1, line 1, Temperature. . . . Cooled to 7°C (45°F) or less within two hours after milking, provided that the blend temperature after the first and subsequent milkings does not exceed 10°C (50°F); line 2, Bacterial Limits. . . . Individual producer milk not to exceed 100,000 per ml prior to commingling with other producer milk; page 51.

(iii) Section 7, Item 19r Cooling, paragraph 1, page 70.

(iv) Section 7, Item 18r Cooling, paragraph 1, page 69A.

(v) Section 7, Item 19r Cooling, Administrative Procedures (1), page 70.

(vi) Section 7, Item 18r Cooling, Administrative Procedures (1), page 70A.

(vii) Sections 9, page 121, 15, 16, and 17, page 126.

(viii) Appendix E, pages 189-190.

(ix) Appendix K, page 261-262.

(x) Appendix N: Regulatory Agency Responsibilities, B. Enforcement: Reinstatement, page 316.

[Statutory Authority: RCW 15.36.021(3). 96-22-058, § 16-101-700, filed 11/4/96, effective 12/5/96. Statutory Authority: RCW 15.36.540 and [15.36.]550. 93-24-093 (Order 5021), § 16-101-700, filed 11/30/93, effective 12/31/93. Statutory Authority: Chapter 15.36 RCW. 80-06-125 (Order 1706), § 16-101-700, filed 6/2/80.]

WAC 16-101-705 Adoption of the dry milk ordinance as the standard for production of condensed and dry milk products and condensed and dry whey. The Grade "A" Condensed and Dry Milk Ordinance Grade "A" Condensed and Dry Milk Products and Condensed and Dry Whey—Supplement I to the Grade "A" Pasteurized Milk Ordinance, 1995 Recommendations of the United States Department of Health and Human Services Public Health Service/Food and Drug Administration is adopted by reference as additional Washington state standards for the production of condensed milk and dry milk products and condensed and dry whey products under chapter 15.36 RCW with the exception of the following portions.

(a) Part 1. Grade A Condensed and Dry Milk Ordinance:

(i) Section 3. Permits paragraphs 4, 5 and 6, page 7.

(ii) Section 7, Table 1, line 1, Temperature . . . Cooled to 7°C (45°F) or less within two hours after milking: *Provided,* That the blend temperature after the first and subsequent milkings does not exceed 10°C (50°F), page 13.

(b) Part 2. Administrative Procedures:

(i) Section 3. Permits paragraphs 4, 5 and 6, page 31.

(ii) Section 7, Table 1, line 1, Temperature . . . Cooled to 7°C (45°F) or less within two hours after milking: *Provided,* That the blend temperature of the first and subsequent milkings does not exceed 10°C (50°F), page 42.

(iii) Section 7, Item 17P Cooling of Milk, Milk Products, Whey, Whey Products, Condensed Milk Products and Condensed Whey, paragraph 1, page 79.

(iv) Section 7, Item 17P Cooling . . . . Administrative Procedures (1), page 79.

(v) Section 13 Penalties, page 88.

(vi) Appendix I, pages 183-184.

(vii) Appendix N, Regulatory Agency Responsibility, B. Enforcement: Reinstatement, page 210.

[Statutory Authority: RCW 15.36.021(3). 96-22-059, § 16-101-705, filed 11/4/96, effective 12/5/96.]

WAC 16-101-711 Adoption of the standards for the fabrication of single-service containers and closures for milk and milk products. The Standards for the Fabrication of Single-Service Containers and Closures for Milk and Milk Products 1995 Recommendations of the United States Department of Health and Human Services Public Health Service/Food and Drug Administration is adopted by reference as additional Washington state standards for the production of single-service containers and closures for milk and milk products.

[Statutory Authority: RCW 15.36.021(3). 96-22-059, § 16-101-711, filed 11/4/96, effective 12/5/96.]

WAC 16-101-716 Adoption of the Procedures Governing the Cooperative State-Public Health Service/Food and Drug Administration Program for Certification of Interstate Milk Shippers. The Procedures Governing the Cooperative State-Public Health Service/Food and Drug Administration Program for Certification of Interstate Milk Shippers 1995 Revision is adopted by reference as Washington state procedures covering certification of interstate milk shippers.

[Statutory Authority: RCW 15.36.021(3). 96-22-059, § 16-101-716, filed 11/4/96, effective 12/5/96.]

WAC 16-101-721 Adoption of Methods of Making Sanitation Ratings of Milk Supplies. The Methods of Making Sanitation Ratings of Milk Supplies 1995 Revision United States Health and Human Services Public Health Service/Food and Drug Administration is adopted by reference as Washington methods for ratings of interstate milk supplies.

[Statutory Authority: RCW 15.36.021(3). 96-22-059, § 16-101-721, filed 11/4/96, effective 12/5/96.]

WAC 16-101-726 Adoption of Evaluation of Milk Laboratories. The Evaluation of Milk Laboratories 1995 Revision United States Health and Human Services Public Health Service/Food and Drug Administration is adopted by reference as the Washington state standard for accreditation of milk laboratories and Certified Industry Supervisors requesting certification and approval for uniform collection and testing required for compliance with the Grade "A" Pasteurized Milk Ordinance.

[Statutory Authority: RCW 15.36.021(3). 96-22-059, § 16-101-726, filed 11/4/96, effective 12/5/96.]

WAC 16-101-800 Raw milk warning labels. (1) **What authority does the department have to require warning labels on retail raw milk containers?** This rule is being promulgated under authority of RCW 15.36.021(1) and 69.04.398(3).

(2) **To what does this rule apply?** The labeling requirements in this rule apply to containers of raw milk intended for sale to consumers in the state of Washington.

(3) **Why is the Washington state department of agriculture adopting warning label requirements for retail raw milk sales?** The department is adopting this rule to inform consumers about possible harm that may occur from consuming raw milk that contains harmful microorganisms.

(4) **What purpose will this rule serve?** The purpose of this rule is to warn purchasers about known hazards associated with the consumption of raw milk so that they may make informed choices about buying these products.

(5) **What warning label must be on raw milk containers?** The raw milk container must bear the following labeling: ***WARNING:*** *This product has not been pasteurized and may contain harmful bacteria. Pregnant women, children, the elderly and persons with lowered resistance to disease have the highest risk of harm from use of this product.*

(6) **What are the specific requirements for warning labels on raw milk?** The raw milk warning labels must meet the following requirements:

(a) The warning label type size must be consistent with the type size of other required labeling, but not less than one-sixteenth inch in height.

(b) The warning label must be conspicuous and in contrasting color from other labeling.

(c) The warning label must be prominently displayed on the container's principal display panel.

(d) The warning label must be clearly readable.

[Statutory Authority: RCW 15.36.021(1) and 69.04.398(3). 97-19-045, § 16-101-800, filed 9/11/97, effective 10/12/97.]

WAC 16-101-990 Where can publications adopted by WSDA under this chapter be obtained? (1) The Grade "A" Pasteurized Milk Ordinance 1995 Recommendation of the United States Public Health Service/Food and Drug Administration can be purchased from the Superintendent of Documents, U.S. Printing Office, Washington D.C.

(2) The following publications can be obtained by writing the Center for Food Safety and Applied Nutrition, Director, Office of Constituent Operations, Industry Activities Staff, HFS-S65 200 "C" Street, SW, Washington D.C. 20204.

(a) The Grade "A" Condensed and Dry Milk Ordinance Grade "A" Condensed and Dry Milk Products and Condensed and Dry Whey—Supplement I to the Grade "A" Pasteurized Milk Ordinance, 1995 Recommendations of the United States Department of Health and Human Services Public Health Service/Food and Drug Administration.

(b) The Standards for the Fabrication of Single-Service Containers and Closures for Milk and Milk Products 1995 Recommendations of the United States Department of Health and Human Services Public Health Service/Food and Drug Administration.

(c) The Procedures Governing the Cooperative State-Public Health Service/Food and Drug Administration Program for Certification of Interstate Milk Shippers 1995 Revision.

(d) The Methods of Making Sanitation Ratings of Milk Supplies 1995 Revision United States Department of Health and Human Services Public Health Services/Food and Drug Administration.

(e) The Evaluation of Milk Laboratories 1995 Revision United States Department of Health and Human Services Public Health Service/Food and Drug Administration.

[Statutory Authority: RCW 15.36.021(3). 96-22-059, § 16-101-990, filed 11/4/96, effective 12/5/96.]

Chapter 16-125 WAC
FARM MILK STORAGE TANKS AND BULK MILK TANKER REQUIREMENTS

WAC

DISPOSITIONS OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

16-125-001 Promulgation. Order 1283, § 16-125-001, filed 1/29/73. Repealed by 84-18-055 (Order 1840), filed 9/5/84. Statutory Authority: Chapter 15.36 RCW.

16-125-040 Tolerances. Order 1283, § 16-125-040, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-050 Authorized calibrators. Order 1283, § 16-125-050, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-060 Calibration charts. Order 1283, § 16-125-060, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-070 Calibration required. Order 1283, § 16-125-070, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-080 Calibration (gaging) procedure. Order 1283, § 16-125-080, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-090 Checking (testing) procedure. Order 1283, § 16-125-090, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-100 Sealing legs. Order 1283, § 16-125-100, filed 1/29/73. Repealed by 99-18-032, filed 8/25/99, effective 9/25/99. Statutory Authority: RCW 15.36.020.

16-125-110 Effective date. Order 1283, § 16-125-110, filed 1/29/73. Repealed by 84-18-055 (Order 1840), filed 9/5/84. Statutory Authority: Chapter 15.36 RCW.

WAC 16-125-010 Definitions.

(1) "Director" means the director of the department of agriculture, or his/her duly authorized representative.

(2) "Bulk milk hauler" means the licensed dairy technician who has primary responsibility for the measuring, weighing, or grading of milk and the collection of samples at the farm.

(3) "Bulk milk hauling" means the transportation of milk or milk products from the producer to a milk processing plant or between milk processing plants, by vehicles belonging to an individual or corporation operating under a bulk milk hauler's license.

(4) "3A standards" means current sanitary standards for dairy equipment and accepted practices as published in the *Dairy Food and Environmental Sanitation* magazine of the International Association of Milk, Food and Environmental Sanitarians (IAMFES).

[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-010, filed 8/25/99, effective 9/25/99. Statutory Authority: Chapter 15.36 RCW. 84-18-055 (Order 1840), § 16-125-010, filed 9/5/84; Order 1283, § 16-125-010, filed 1/29/73.]

WAC 16-125-020 Construction.

All new farm tanks must conform with the 3-A sanitary standards for farm milk cooling and holding tanks. Whenever a ladder or platform is needed for sampling, measuring or other purposes, it must be permanently attached to the tank or a wall. All calibrated rods must be identified with the serial number of the tank. Sight glass tubes must be of one-piece construction and permanently attached to the farm tank. All sight glass tubes must be cleaned with a clean-in-place (C.I.P.) system.

[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-020, filed 8/25/99, effective 9/25/99; Order 1283, § 16-125-020, filed 1/29/73.]

WAC 16-125-030 Installation.

Before any person installs a new tank or relocates a used tank, he or she must file drawings and detailed information about where and how the milk storage tank is to be installed with the director. There must be a minimum of two feet clearance between the sides of the tank and the walls of the milkhouse or other permanent

equipment and a minimum of three feet on the working side of the tank and at the outlet valve. Adequate additional space necessary for normal milkhouse operations must be provided. There must be at least 30 inches clearance between the top of the pouring tank lip and the ceiling. Adequate space must be provided above the tank to accommodate the measuring rod.
Provisions of the National Bureau of Standards' Handbook 44 Code on Farm Milk Tanks as adopted under chapter 19.94 RCW applicable to installation and use shall be applicable.
[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-030, filed 8/25/99, effective 9/25/99; Order 1283, § 16-125-030, filed 1/29/73.]

WAC 16-125-035 Farm tank pickup and washing requirements.
(1) All milk must be picked up at least every forty-eight hours from farm tanks.
(2) All farm tanks must be emptied, washed and sanitized at least once every forty-eight hours.
[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-035, filed 8/25/99, effective 9/25/99.]

WAC 16-125-120 Bulk milk tanker requirements.
All bulk milk tankers operating in the state of Washington must comply with the provisions of 3A standard 05-14. Additional requirements are:
(1) Trucks and trailers with remote pumps, mounted on tractor or front trailer, and a system of external hoses and/or piping may be used: Provided, That
(a) External flexible hoses meet the following requirements:
(i) Hoses are the thick walled rubber type and meet 3A standards 18-01, 62-01 and 63-01 except for pump box hoses.
(ii) Hoses are capped with a sanitary cap when not in use.
(b) Piping along the length of the trailer is of the fixed type and meets the following requirements:
(i) The pipe is stainless steel and meets the requirements of 3A standards 63-02 and 33-01. Other materials may be used if they are approved by the Milk Safety Branch of the Food and Drug Administration.
(ii) The sanitary piping is enclosed in an insulated holder and both the sanitary piping and the holder are capped with a dust tight cap when disconnected.
(c) Sanitary air that meets the requirements of 3A standard 64-04 may be used to remove residual milk from the external piping system.
(d) Any milk in the external piping system that exceeds forty-five degrees Fahrenheit is discarded.
(e) Adequate facilities must be provided at all receiving stations for the proper cleaning and sanitizing of tankers including the external lines and valves.
(2) All external valves on a tanker must be provided with a means of protection against dust, dirt, and road debris.
(a) Outlet valves must be protected by dust tight covers that will comply with 3A standard 05-14.
(b) Inlet valves and valves with attached hoses must be protected by a relatively dust tight cover. This cover may be:
(i) Stainless steel with an opening for the connection of hoses that is sealed with a flexible material that will prevent the entrance of dust, dirt, or road debris.
(ii) A flexible mounting made of rubber or other approved material that is close fitting, smooth, impervious, and easily removable for cleaning.
(iii) Any other cover for which plans have been submitted to and approved by the director.
(c) All valves not connected to hoses must have a sanitary cap and an approved dust cover on them.
(3) Markings on each truck or trailer must be sufficient to identify the owner of the truck or trailer.
(4) Cleaning and bactericidal treatment of all product contact surfaces including valves, hoses, covers, connections, appurtenances, pumps, and pump compartment of each tanker, when used, must be accomplished at least once every twenty-four hours after first use. If the tanker is not used for hauling milk for seventy-two hours after cleaning and sanitizing it must be sanitized again before it may be used for hauling milk. After sanitization each tanker must be tagged to show the date washed, place washed, and initials or signature of the person who washed the tanker. This wash tag must not be removed until the tanker is rewashed. It shall be the responsibility of the bulk milk hauler to ensure that the wash tag is present and that the tank is in fact clean prior to commencing his route.
(5) Plans and drawings relating to tankers submitted to the director will be treated with confidentiality except as required under Public Disclosure Act, chapter 42.17 RCW.
(6) Bulk milk tankers must meet the requirements under chapter 69.04 RCW and the rules adopted thereunder for transportation of food.
[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-120, filed 8/25/99, effective 9/25/99. Statutory Authority: Chapter 15.36 RCW. 84-18-055 (Order 1840), § 16-125-120, filed 9/5/84.]

WAC 16-125-200 Recording thermometers -- Installation.

(1) All new farm bulk tank installations must include a recording thermometer and an automatic interval timer. Installation of a used milk tank will be regarded as a new installation.
(2) The installation and operation of recording thermometers and interval timers shall be the responsibility of the holder of the Grade A producer permit.
(3) Recording devices must not be attached to a farm tank. Recording devices may be suspended on metal brackets from the ceiling, firmly attached to the inside wall of the milk room, or at any other location acceptable to the department. The recording device must be mounted no more than six feet from the floor or be otherwise accessible from the floor without the necessity of climbing.
(4) The sensor bulb or device must be located so as to record the temperature of the milk in the tank before the milk reaches twenty percent of the tank volume. A capillary system containing toxic gas or liquids must not be used in a bare bulb sensor device.
(5) The recorder and chart must be capable at a minimum of recording from thirty-two degrees to one hundred eighty degrees F, or above, and must be accurate within plus or minus two degrees F.
(6) The case of the recording device must be moisture-proof under operating conditions in the milk house or milk room.
(7) The recording chart must make at a minimum one revolution every seven days. A strip chart must not be used.
(8) The recording clock must be electrically operated. The recorder pen must be set to the actual time.
(9) If at any time, the recording device becomes inoperable or out of tolerance, the inspection service and the pooling agent or hauler must be notified immediately by the producer. Repair or replacement of the device must be made as soon as possible.
(10) The producer must maintain an adequate supply of recording charts. The charts must fit the specific instrument installed.
(11) To prevent stratification of the milk in the tank the interval timer must be set so the milk will be agitated for at least five minutes every hour.
[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-200, filed 8/25/99, effective 9/25/99. Statutory Authority: Chapter 15.36 RCW. 86-17-014 (Order 1902), § 16-125-200, filed 8/8/86.]

WAC 16-125-210 Recording thermometer -- Operation.
(1) Milk and milk products for consumption in the raw state or for pasteurization must be cooled to forty degrees F or lower within two hours after completion of milking and maintained at that temperature until picked up: Provided, That the blend temperature after the first and subsequent milkings may not exceed fifty degrees F.
(2) In making a milk pick-up, the licensed grader and sampler must:
(a) Remove the chart from the recorder before the chart has lapsed;
(b) Mark the date and time of pick-up;
(c) Sign the chart;
(d) Date and install a new chart, if necessary;
(e) File the completed charts under protected conditions, provided for by the producer, unless they are taken to the purchaser's premises for his review.
(f) If the charts are taken from the dairy farm, they must be returned within ten days from the date they were taken: Provided, That subject to the approval of its members and the department, a pooling agent, processing plant, receiving plant or regular place of business may file the recording thermometer charts at its place of business.
(g) The official milk temperature must be taken with an accurate, properly calibrated thermometer.
(3) The temperature recording charts may be used for more than one pick-up: Provided, That all the pick-ups occur within the maximum time interval of the chart. When the chart is used for more than one pick-up, the licensed grader and sampler must identify each lot of milk with the date, time of pick-up and his/her signature.

(4) Before removing milk from a farm bulk tank, the licensed grader and sampler must check the recording chart. If the licensed grader and sampler finds milk temperature variations extending beyond the legal limits, he/she must immediately notify the producer, or in the absence of the producer, an employee, and the producer's marketing agent. The licensed grader and sampler must sign the chart noting the date, time, stick reading and indicate that a temperature infraction has occurred. The producer's marketing agent must notify the department of agriculture of temperature standard violations detected through the official milk quality testing program. Temperature standard violations reported to the department will become part of the producer's official record.
(5) Except as otherwise provided in subsection (2) of this section, recorder charts must be held at the dairy farm for ninety days and be made available to the director.
[Statutory Authority: RCW 15.36.020. 99-18-032, § 16-125-210, filed 8/25/99, effective 9/25/99. Statutory Authority: Chapter 15.36 RCW. 86-17-014 (Order 1902), § 16-125-210, filed 8/8/86.]

STANDARDS FOR GRADE "A" RAW MILK FOR PASTEURIZATION, ULTRA-PASTEURIZATION OR ASEPTIC PROCESSING

ITEM 1r. ABNORMAL MILK

Lactating animals which show evidence of the secretion of abnormal milk in one or more quarters, based upon bacteriological, chemical or physical examination, shall be milked last or with separate equipment and the milk shall be discarded. Lactating animals treated with, or lactating animals which have consumed chemical, medicinal or radioactive agents which are capable of being secreted in the milk and which, in the judgement of the regulatory agency, may be deleterious to human health, shall be milked last or with separate equipment and the milk disposed of as the regulatory agency may direct.

PUBLIC-HEALTH REASON

The health of lactating animal is a very important consideration because a number of diseases of lactating animals, including salmonellosis, staphylococcal infection and streptococcal infection, may be transmitted to man through the medium of milk. The organisms of most of these diseases may get into the milk either directly from the udder or indirectly through infected body discharges which may drop, splash or be blown into the milk.

Bovine mastitis is an inflammatory and, generally, highly communicable disease of the bovine udder. Usually, the inciting organism is a streptococcus of bovine origin (type B), but the disease is often caused by a staphylococcus or other infectious agent. Occasionally lactating animal's udders become infected with hemolytic streptococci of human origin, which may result in milk-borne epidemics of scarlet fever or septic sore throat. The toxins of staphylococci, and possibly other organisms in milk, may cause severe gastroenteritis. Some of these toxins are not destroyed by pasteurization.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Milk from lactating animals being treated with medicinal agents, which are capable of being secreted in the milk, is not offered for sale for such a period as is recommended by the attending veterinarian or as indicated on the package label of the medicinal agent.
2. Milk from lactating animals treated with or exposed to insecticides, not approved for use on dairy animals by the U.S. Environmental Protection Agency, is not offered for sale.
3. The regulatory agency requires such additional tests for the detection of abnormal milk as they deem necessary.
4. Bloody, stringy, off-colored milk, or milk that is abnormal to sight or odor, is so handled and disposed of as to preclude the infection of other lactating animals and the contamination of milk utensils.
5. Lactating animal secreting abnormal milk are milked last or in separate equipment which effectively prevents the contamination of the wholesome supply. Abnormal milking equipment is maintained clean to reduce the possibility of re-infecting or cross infection of the dairy animal
6. Equipment, utensils and containers used for the handling of abnormal milk are not used for the handling of milk to be offered for sale, unless they are first cleaned and effectively sanitized.

7. Processed animal waste derivatives, used as a feed ingredient for any portion of the total ration of the lactating dairy animal, have been:

a. Properly processed in accordance with at least those requirements contained in the Model Regulations for Processed Animal Wastes developed by the Association of American Feed Control Officials; and

b. Do not contain levels of deleterious substances, harmful pathogenic organisms or other toxic substances which are secreted in the milk at any level which may be deleterious to human health.

8. Unprocessed poultry litter and unprocessed recycled animal body discharges are not fed to lactating dairy animals.

ITEM 2r. MILKING BARN, STABLE OR PARLOR--CONSTRUCTION

A milking barn, stable or parlor shall be provided on all dairy farms in which the milking herd shall be housed during milking time operations. The areas used for milking purposes shall:

1. Have floors constructed of concrete or equally impervious materials. *Provided*, convalescent (maternity) pens located in milking areas of stanchion-type barns may be used when they comply with the guidelines specified in Appendix C.III.

2. Have walls and ceilings which are smooth, painted or finished in an approved manner; in good repair; ceiling dust-tight;

3. Have separate stalls or pens for horses, calves and bulls, and not be overcrowded;

4. Be provided with natural and/or artificial light, well distributed, for day and/or night milking;

5. Provide sufficient air space and air circulation to prevent condensation and excessive odors;

PUBLIC-HEALTH REASON

When milking is done elsewhere than in a suitable place provided for this purpose, the milk may be contaminated. Floors constructed of concrete or other impervious materials can be kept clean more easily than floors constructed of wood, earth or similar materials and are; therefore, more apt to be kept clean. Painted, or properly finished walls and ceilings encourage cleanliness. Tight ceilings reduce the likelihood of dust and extraneous material getting into the milk. Adequate light makes it more probable that the barn will be clean and that the lactating animals will be milked in a sanitary manner.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. A milking barn, stable or parlor is provided on all dairy farms.

2. Gutters, floors and feed troughs are constructed of good quality concrete or equally impervious material. Floors shall be easily cleaned (brushed surfaces permitted), be graded to drain, maintained in good repair and free of excessive breaks or worn areas that may create pools.

3. Gravity flow manure channels in milking barns, if used, shall be constructed in accordance with the specifications of Appendix C. II or acceptable to the state regulatory agency.

4. Stall barns, when used with gutter grates over manure storage pits, are designed and constructed in accordance with the specifications of Appendix C IV. or acceptable to the state regulatory agency.

5. Walls and ceilings are finished with wood, tile, smooth-surfaced concrete, cement plaster, brick or other equivalent materials with light colored surfaces. Walls, partitions, doors, shelves, windows and ceilings shall be kept in good repair, and surfaces shall be refinished whenever wear or discoloration is evident.

Whenever feed is stored overhead, ceilings shall be constructed to prevent the sifting of chaff and dust into the milking barn, stable or parlor. If a hay opening is provided from a loft which is open into the milking portion of the barn, such openings shall be provided with a dust-tight door which shall be kept closed during milking operations.

6. Bull pens, maternity and calf stalls and horse stalls are partitioned from the milking portion of the barn. Such portions of the barn that are not separated by tight partitions shall comply with all the requirements of this item.

7. Overcrowding is not evidenced by the presence of calves, lactating animals or other barnyard animals in walks or feed alleys. Inadequate ventilation and excessive odors may also be evidence of an overcrowded barn.

8. The milking barn is provided with natural and/or artificial light to insure that all surfaces and particularly the working areas will be plainly visible. The equivalent of at least 10 foot-candles of light in all working areas shall be provided.

9. Air circulation is sufficient to minimize odors and to prevent condensation upon walls and ceilings.

10. A dust-tight partition, provided with doors that are kept closed except when in actual use, shall separate the milking portion of the barn from any feed room or silo in which feed is ground or mixed, or in which sweet feed is stored.

When conditions warrant, the regulatory agency may approve a barn without four walls extending from floor to roof, or a shed-type barn provided the requirement of Item 3r., prohibiting animals and fowl from entering the barn is satisfied.

ITEM 3r. MILKING BARN, STABLE OR PARLOR--CLEANLINESS

The interior shall be kept clean. Floors, walls, ceilings, windows, pipelines and equipment shall be free of filth and/or litter and shall be clean. Swine and fowl shall be kept out of the milking area.

Feed shall be stored in a manner that will not increase the dust content of the air or interfere with the cleaning of the floor.

Surcingles, milk stools and antikickers shall be kept clean and stored above the floor.

PUBLIC-HEALTH REASON

A clean interior reduces the chances of contamination of the milk or milk pails during milking. The presence of other animals increases uncleanliness and the potential for the spread of disease.

Clean milk stools and surcingles (or belly straps) reduce the likelihood of contamination of milker's hands between the milking of one lactating animal and the milking of another.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. The interior of the milking barn, stable or parlor is kept clean.

2. Leftover feed in feed mangers appears fresh and is not wet or soggy.

3. The bedding material, if used, does not contain more manure than has accumulated since the previous milking.

4. Outside surfaces of pipeline systems located in the milking barn, stable or parlor are reasonably clean.

5. Gutter cleaners are reasonably clean.

6. All pens, calf stalls and bull pens, if not separated from the milking barn, stable or parlor, are clean.

7. Swine and fowl are kept out of the milking area.

8. Milk stools are not padded and are constructed to be easily cleaned. Milk stools, surcingles and antikickers are kept clean and are stored above the floor in a clean place in the milking barn, stable parlor or milkhouse, when not in use.

9. Gravity flow manure channels in milking barns, if used, shall be maintained in accordance with Appendix C. II.

10. Stall barns, when used with gutter grates over manure storage pits, are operated and maintained in accordance with the specifications of C. IV.

The method of cleaning is immaterial. Dairymen whose barns are provided with water under pressure should scrub the floors after each milking with a stiff-bristled brush. In barns in which water under pressure is not available, the floors may be brushed dry and limed. In the latter event, care should be exercised to prevent caking of the lime. When lime or phosphate is used, it shall be spread evenly on the floor as a thin coating. If clean floors are not maintained by this method, the sanitarian should require cleaning with water.

ITEM 4r. COWYARD

The cowyard shall be graded and drained and shall have no standing pools of water or accumulations of organic wastes. *Provided*, that in loafing or lactating animal-housing areas, lactating animal droppings and soiled bedding shall be removed, or clean bedding added, at sufficiently frequent intervals to prevent the soiling of the lactating animal's udder and flanks. Waste feed shall not be allowed to accumulate. Manure packs shall be properly drained and shall provide a reasonably firm footing. Swine shall be kept out of the cowyard.

PUBLIC-HEALTH REASON

The cowyard is interpreted to be that enclosed or unenclosed area in which the lactating animals are apt to congregate, approximately adjacent to the barn, including animal-housing areas. This area is; therefore, particularly apt to become filthy with manure droppings, which may result in the soiling of the lactating animal's udders and flanks. The grading and drainage of the cowyard, as far as are practicable, are required because wet conditions are conducive to fly breeding and make it difficult to keep manure removed and the lactating animals clean. If manure and barn sweepings are allowed to accumulate in the cowyard, fly breeding will be promoted, and the lactating animals, because of their habit of lying down, will be more apt to have manure-soiled udders. Lactating animals should not have access to piles of manure, in order to avoid the soiling of udders and the spread of diseases among dairy animals.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. The cowyard, which is the enclosed or unenclosed area adjacent to the milking barn in which the lactating animals may congregate, including animal-housing areas and feed lots, is graded and drained, depressions and soggy areas are filled, and lactating animal's lanes are reasonably dry.

2. Approaches to the barn door and the surroundings of stock watering and feed

stations are solid to the footing of the animals.

3. Wastes from the barn or milkhouse are not allowed to pool in the cowyard. Cowyards which are muddy due to recent rains should not be considered as violating this item.

4. Manure, soiled bedding and waste feed are not stored or permitted to accumulate therein in such a manner as to permit the soiling of cow's udders and flanks. Animal-housing areas (stables without stanchions, such as loose-housing stables, pen stables, resting barns, holding barns, loafing sheds, wandering sheds, free-stall housing) shall be considered as part of the cowyard. Manure packs shall be solid to the footing of the animals (See Appendix C).

5. Cowyards are kept reasonably free of animal droppings. Animal droppings shall not be allowed to accumulate in piles that are accessible to the animals.

ITEM 5r. MILKHOUSE OR ROOM-- CONSTRUCTION AND FACILITIES

A milkhouse or room of sufficient size shall be provided, in which the cooling, handling and storing of milk and the washing, sanitizing and storing of milk containers and utensils shall be conducted. Except as provided for in Item 12r. of this section.

The milkhouse shall be provided with a smooth floor constructed of concrete or equally impervious material, graded to drain and maintained in good repair. Liquid waste shall be disposed of in a sanitary manner. Floor drains shall be accessible and shall be trapped if connected to a sanitary sewer system.

The walls and ceilings shall be constructed of smooth material, be in good repair and be well painted, or finished in an equally suitable manner.

The milkhouse shall have adequate natural and/or artificial light and be well ventilated.

The milkhouse shall be used for no other purpose than milkhouse operations. There shall be no direct opening into any barn, stable or parlor or into a room used for domestic purposes. *Provided*, that a direct opening between the milkhouse and milking barn, stable or parlor is permitted when a tight-fitting, self-closing, solid door (s) hinged to be single or double acting is provided. Screened vents in the wall between the milkhouse and a breezeway, which separates the milkhouse from the milking parlor, are permitted, provided animals are not housed within the milking facility.

Water under pressure shall be piped into the milkhouse.

The milkhouse shall be equipped with a two-compartment wash vat and adequate hot water heating facilities.

A transportation tank may be used for the cooling and/or storage of milk on the dairy farm. Such tank shall be provided with a suitable shelter for the receipt of milk. Such shelter shall be adjacent to, but not a part of, the milkroom and shall comply with the requirements of the milkroom with respect to construction items, lighting, drainage, insect and rodent control and general maintenance. In addition, the following minimum criteria shall be met:

1. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device which cools the milk to 7° C (45° F) or less.
2. The milk shall be sampled at the direction of the regulatory agency in a manner so as to preclude contaminating the tanker or sample, by an acceptable milk sample collector.

3. The milk tank truck shall be effectively agitated in order to collect a representative sample.

When the regulatory agency determines conditions exist whereby the milk tank truck can be adequately protected and sampled without contamination, a shelter need not be provided if the following minimum criteria are met:

1. The milk hose connection is accessible to, and made from within, the milkroom. The milk hose connection to the milk tank truck is completely protected from the outside environment at all times.
2. To assure continued protection of the milk, the milk tank truck manhole must be sealed after the truck has been cleaned and sanitized.
3. The milk tank truck shall be washed and sanitized at the dairy plant receiving the milk or at a wash station acceptable to the regulatory agency.
4. To prevent overflow from the milk tank truck which would create unsanitary conditions around the milk house, the milk tank truck shall be equipped with a liquid level sensor device of sanitary design. The sensor device shall deactivate the milk pump or sound an alarm when activated.
5. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device which cools the milk to below 7°C (45°F).
6. The milk shall be sampled at the direction of the regulatory agency, in a manner so as to preclude contaminating the milk tank truck or sample, by a permitted milk sample collector, or the equivalent. The milk in the milk tank truck shall be effectively agitated in order to collect a representative sample.
7. The milk tank truck shall be parked on a self-draining concrete or equally impervious surface during filling and storage.

PUBLIC-HEALTH REASON

Unless a suitable, separate place is provided for the cooling, handling and storing of milk and for the washing, sanitizing and storage of milk utensils, the milk or the utensils may become contaminated. Construction which permits easy cleaning promotes cleanliness. A well drained floor of concrete or other impervious material promotes cleanliness. Ample light promotes cleanliness, and proper ventilation reduces the likelihood of odors and condensation. A well equipped milkhouse which is separated from the barn, stable or parlor and the living quarters provides a safeguard against the exposure of milk and milk utensils to infection from persons, other than regular milk handlers, and from insects and dust.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. A separate milkhouse of sufficient size is provided for the cooling, handling and storing of milk and the washing, sanitizing and storing of milk containers and utensils. Except as provided for in Item 12r. of this section.

2. The floors of all milkhouses are constructed of good quality concrete (float finish permissible), or equally impervious tile, or brick laid closely with impervious material, or metal surfacing with impervious joints or other material the equivalent of concrete and maintained free of breaks, depressions and surface peelings.

3. The floor slopes to drain so that there are no pools of standing water. The joints between the floor and the walls shall be watertight.

4. The liquid wastes are disposed of in a sanitary manner. All floor drains are accessible and are trapped if connected to a sanitary sewer.

5. Walls and ceilings are constructed of smooth dressed lumber or similar material; well painted with a light-colored washable paint; and are in good repair. Surfaces and joints shall be tight and smooth. Sheet metal, tile, cement block, brick, concrete, cement plaster or similar materials of light color may be used and the surfaces and joints shall be smooth.

6. A minimum of 20 foot-candles of light is provided at all working areas from natural and/or artificial light for milkhouse operations.

7. The milkhouse is adequately ventilated to minimize condensation on floors, walls, ceilings and clean utensils.

8. Vents, if installed, and lighting fixtures are installed in a manner to preclude the contamination of bulk milk tanks or clean utensil storage areas.

9. The milkhouse is used for no other purpose than milkhouse operations.

10. There is no direct opening into any barn, stable or parlor or room used for domestic purposes. Except that an opening between the milkhouse and milking barn, stable or parlor is permitted when a tight-fitting, self-closing, solid door(s) hinged to be single or double acting is provided. Except that screened vents are permitted in the wall between the milkhouse and a breezeway, which separates the milkhouse from the milking parlor, provided animals are not housed within the milking facility.

11. A vestibule, if used, complies with the applicable milkhouse construction requirements.

12. The transfer of milk from a bulk-holding cooling tank to a transport tank is through a hose port located in the milkhouse wall. The port shall be fitted with a tight door, which shall be in good repair. It shall be kept closed except when the port is in use. An easily cleanable surface shall be constructed under the hose port, adjacent to the outside wall and sufficiently large to protect the milk hose from contamination.

13. Water under pressure is piped into the milkhouse.

14. Each milkhouse is provided with facilities for heating water in sufficient quantity and to such temperatures for the effective cleaning of all equipment and utensils (See Appendix C).

15. The milkhouse is equipped with a wash-and-rinse vat having at least two compartments. Each compartment must be of sufficient size to accommodate the largest utensil or container used. The upright wash vat for milk pipelines and milk machines may be accepted as one part of the two-compartment vat. *Provided*, that the stationary wash rack, in or on the vat, and the milking machines inflations and appurtenances are completely removed from the vat during the washing, rinsing and/or sanitizing of other utensils and equipment. Where mechanical cleaning/recirculated systems eliminate the need for handwashing of equipment, the presence of the second wash vat compartment may be optional, if so determined by the State Regulatory Agency, on an individual farm basis.

16. A transportation tank, with or without overhead protection may be used for cooling and storing milk on a dairy farm. If a suitable shelter is provided for a transportation truck used for cooling and storing milk, such shelter shall be adjacent to, but not a part of, the milkroom and shall comply with the prerequisites of the milkroom with respect to construction items, lighting, drainage, insect and rodent control

and general maintenance. See Appendix C for suggested plans and information on size, construction, operation and maintenance of milkhouses. In addition, the following minimum criteria shall be met:

1. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device which cools the milk to 7°C (45° F) or less.

2. The milk shall be sampled at the direction of the regulatory agency in a manner so as to preclude contaminating the milk tank truck or sample, by an acceptable milk sample collector.

3. The milk tank truck shall be effectively agitated in order to collect a representative sample.

When the regulatory agency determines conditions exist whereby the milk tank truck can be adequately protected and sampled without contamination, a shelter need not be provided if the following minimum criteria are met:

1. The milk hose connection is accessible to, and made from within, the milkroom. The milk hose connection to the milk tank truck is completely protected from the outside environment at all times.

2. To assure continued protection of the milk, the milk tank truck manhole must be sealed after the truck has been cleaned and sanitized.

3. The milk tank truck shall be washed and sanitized at the dairy plant receiving the milk or at a wash station acceptable to the regulatory agency.

4. To prevent overflow from the milk tank truck which would create unsanitary conditions around the milk house, the milk tank truck shall be equipped with a liquid level sensor device of sanitary design. The sensor device shall deactivate the milk pump or sound an alarm when activated.

5. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device which cools the milk to below 7°C (45° F).

6. The milk shall be sampled at the direction of the regulatory agency, in a manner so as to preclude contaminating the milk tank truck or sample, by a permitted milk sample collector, or the equivalent. The milk in the milk tank truck shall be effectively agitated in order to collect a representative sample.

7. The milk tank truck shall be parked on a self-draining concrete or equally impervious surface during filling and storage.

ITEM 6r. MILKHOUSE OR ROOM--CLEANLINESS

The floors, walls, ceilings, windows, tables, shelves, cabinets, wash vats, non-product-contact surfaces of milk containers, utensils and equipment and other milkroom equipment shall be clean. Only articles directly related to milkroom activities shall be permitted in the milkroom. The milkroom shall be free of trash, animals and fowl.

PUBLIC-HEALTH REASON

Cleanliness in the milkroom reduces the likelihood of contamination of the milk.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. The milkroom structure, equipment and other milkroom facilities used in its operation or maintenance are clean at all times.

2. Incidental articles such as desks, refrigerators, and storage cabinets may be in the milkroom provided they are kept clean

and ample space is available to conduct the normal operations in the milkroom and will not cause contamination of the milk.

3. Vestibules, if provided, are kept clean.

4. Animals and fowl are kept out of the milkroom.

ITEM 7r. TOILET

Every dairy farm shall be provided with one or more toilets, conveniently located, properly constructed, operated and maintained in a sanitary manner. The waste shall be inaccessible to flies and shall not pollute the soil surface or contaminate any water supply.

PUBLIC-HEALTH REASON

The organisms of typhoid fever, dysentery and gastrointestinal disorders may be present in the body wastes of persons who have these diseases. In the case of typhoid fever, well persons (carriers) also may discharge the organisms in their body wastes. If a toilet is not fly-tight and so constructed as to prevent overflow, infection may be carried from the excreta to the milk, either by flies or through the pollution of ground water supplies or streams to which the lactating animals have access.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. There is at least one flush toilet connected to a public sewer system or to an individual sewage-disposal system or a chemical toilet, earth pit privy or other type of privy. Such sewage systems shall be constructed and operated in accordance with the standards outlined in Appendix C, or when a state or local regulatory agency has more effective standards designed specifically for that region, these standards may apply, provided, that there is no mixing of animal and human waste..

2. A toilet or privy is convenient to the milking barn and the milkroom. There shall be no evidence of human defecation or urination about the premises.

3. No privy opens directly into the milkroom.

4. The toilet room, including all fixtures and facilities, is kept clean and free of flies and odors.

5. Where flush toilets are used, doors to toilet rooms are tight and self-closing. All outer openings in toilet rooms shall be screened or otherwise protected against the entrance of flies.

6. Vents of earth pits are screened.

ITEM 8r. WATER SUPPLY

Water for milkhouse and milking operations shall be from a supply properly located, protected and operated and shall be easily accessible, adequate and of a safe, sanitary quality.

PUBLIC-HEALTH REASON

A dairy farm water supply should be accessible in order to encourage its use in ample quantity in cleaning operations; it should be adequate so that cleaning and rinsing will be thorough; and it should be of a safe, sanitary quality in order to avoid contamination of milk utensils.

A polluted water supply, used in the rinsing of the dairy utensils and containers, may be more dangerous than a similar water supply which is used for drinking purposes only. Bacteria grow much faster in milk than in water and the severity of an attack of a given disease depends largely upon the size of the dose of disease organisms taken into the system. Therefore, a small number

of disease organisms consumed in a glass of water from a polluted well may possibly result in no harm; whereas, if left in a milk utensil, which has been rinsed with the water, they may after several hours growth, in the milk, increase in such numbers as to cause disease when consumed.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. The water supply for milkhouse and milking operations is approved as safe by the State water control authority and, in the case of individual water systems, complies with the specifications outlined in Appendix D, and the bacteriological standards outlined in Appendix G.

2. No cross-connection exists between a safe water supply and any unsafe or questionable water supply or any other source of pollution.

3. There are no submerged inlets through which a safe water supply may be contaminated.

4. The well or other source of water is located and constructed in such a manner that neither under-ground nor surface contamination from any sewerage systems, privy or other source of pollution can reach such water supply.

5. New individual water supplies and water supply systems which have been repaired or otherwise become contaminated are thoroughly disinfected before being placed in use (See Appendix D). The supply shall be made free of the disinfectant by pumping to waste before any sample for bacteriological testing shall be collected.

6. All containers and tanks used in the transportation of water are sealed and protected from possible contamination. These containers and tanks shall be subjected to a thorough cleaning and a bacteriological treatment prior to filling with potable water to be used at the dairy farm. To minimize the possibility of contamination of the water during its transfer from the potable tanks to the elevated or ground-water storage at the dairy farm, a suitable pump, hose and fittings shall be provided. When the pump, hose and fittings are not being used, the outlets shall be capped and stored in a suitable dust-proof enclosure so as to prevent their contamination. The storage tank at the dairy farm shall be constructed of impervious material, provided with a dust and rainproof cover and also provided with an approved-type vent and roof hatch. All new reservoirs or reservoirs which have been cleaned shall be disinfected prior to placing them into service (See Appendix D).

7. Samples for bacteriological examination are taken upon the initial approval of the physical structure, based upon the requirements of this *Ordinance*, when any repair or alteration of the water supply system has been made and at least every 3 years. *Provided*, that water supplies with buried well casing seals, installed prior to the adoption of this section, shall be tested at intervals no greater than 6 months apart. Whenever such samples indicate either the presence of bacteria of the coliform group or whenever the well casing, pump or seal need replacing or repair, the well casing and seal shall be brought above the ground surface and shall comply with all other applicable construction criteria of this section. *Provided*, that when water is hauled to the dairy farm, such water shall be sampled for bacteriological examination at the point of use and submitted to a laboratory at least four times in separate months during any consecutive six months. Bacteriological examinations shall be conducted in a laboratory acceptable to the regulatory agency. To determine if water samples have been taken at the frequency

established in this section, the interval shall include the designated period plus the remaining days of the month in which the sample is due.

8. Current records of water test results shall be retained on file with the regulatory agency or as the regulatory agency directs.

ITEM 9r. UTENSILS AND EQUIPMENT--CONSTRUCTION

All multi-use containers, equipment and utensils used in the handling, storage or transportation of milk shall be made of smooth, nonabsorbent, corrosion-resistant, nontoxic materials, and shall be so constructed as to be easily cleaned. All containers, utensils and equipment shall be in good repair. Multiple-use woven material shall not be used for straining milk. All single-service articles shall have been manufactured, packaged, transported and handled in a sanitary manner and shall comply with the applicable requirements of Item 11p of this section. Articles intended for single-service use shall not be reused.

Farm holding/cooling tanks, welded sanitary piping and transportation tanks shall comply with the applicable requirements of Items 10p and 11p of this section.

PUBLIC-HEALTH REASON

Milk containers and other utensils without flush joints and seams, without smooth, easily cleaned, and accessible surfaces, and not made of durable, non-corrodible material, are apt to harbor accumulations in which undesirable bacterial growth is supported. Single-service articles which have not been manufactured and handled in a sanitary manner may contaminate the milk.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. All multi-use containers, equipment and utensils, which are exposed to milk or milk products, or from which liquids may drip, drain or be drawn into milk or milk products, are made of smooth impervious, nonabsorbent, safe materials of the following types:

a. Stainless steel of the AISI (American Iron and Steel Institute) 300 series; or

b. Equally corrosion-resistant, nontoxic metal; or

c. Heat-resistant glass; or

d. Plastic or rubber and rubber-like materials which are relatively inert, resistant to scratching, scoring, decomposition, crazing, chipping and distortion, under normal use conditions; are nontoxic, fat resistant, relatively nonabsorbent, relatively insoluble, do not release component chemicals or impart flavor or odor to the product; and which maintain their original properties under repeated use conditions.

2. Single-service articles have been manufactured, packaged, transported and handled in a sanitary manner and comply with the applicable requirements of Item 11p.

3. Articles intended for single-service use are not reused.

4. All containers, equipment and utensils are free of breaks and corrosion.

5. All joints in such containers, equipment and utensils are smooth and free from pits, cracks or inclusions.

6. Mechanically cleaned milk pipelines and return-solution lines are self-draining. If gaskets are used, they shall be self-positioning and of material meeting specifications described in 1. d. above, and

shall be of such design, finish and application as to form a smooth, flush, interior surface. If gaskets are not used, all fittings shall have self-positioning faces designed to form a smooth, flush, interior surface. All interior surfaces of welded joints in pipelines shall be smooth and free of pits, cracks and inclusions.

7. Detailed plans for mechanically cleaned pipeline systems are submitted to the regulatory agency for written approval prior to installation. No alteration or addition shall be made to any milk pipeline system without prior written approval of the regulatory agency.

8. Strainers, if used, are of perforated metal design, or so constructed as to utilize single-service strainer media.

9. All milking machines, including heads, milk claws, milk tubing and other milk-contact surfaces can be easily cleaned and inspected. Pipelines, milking equipment and appurtenances which require a screw driver or special tool shall be considered easily accessible for inspection, providing the necessary tools are available at the milkhouse.

10. Milk cans have umbrella-type lids.

11. Farm holding/cooling tanks, welded sanitary piping and transportation tanks comply with the applicable requirements of Items 10p and 11p of this section.

12. During filling, flexible plastic/rubber hoses may be used between the fill valves of bottom fill bulk milk storage tanks, when needed for functional purposes. Such hoses shall be drainable, be as short as practical, have sanitary fittings, and be supported to maintain uniform slope and alignment. The end fittings of such hoses shall be permanently attached in such a manner that will assure a crevice-free joint between the hose and the fitting, which can be cleaned by mechanical means. The hoses shall be included as part of a mechanical cleaning system.

NOTE: 3-A Standards: 3-A Sanitary Standards for dairy equipment are promulgated jointly by the Sanitary Standards Subcommittee of the Dairy Industry Committee, the Committee on Sanitary Procedure of the International Association for Food Protection and the Milk Safety Branch, Food and Drug Administration, Public Health Service, Center for Food Safety and Applied Nutrition, Department of Health and Human Services. Equipment manufactured in conformity with 3-A Sanitary Standards complies with the sanitary design and construction standards of the *Ordinance*.

ITEM 10r. UTENSILS AND EQUIPMENT--CLEANING

The product-contact surfaces of all multi-use containers, equipment and utensils used in the handling, storage or transportation of milk shall be cleaned after each usage.

PUBLIC-HEALTH REASON

Milk cannot be kept clean or free of contamination if permitted to come into contact with unclean containers, utensils or equipment.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. There shall be a separate wash manifold for all mechanically cleaned milk pipelines in all new or extensively remodeled facilities.

2. The product-contact surface of all multi-use containers, equipment and utensils

used in the handling, storage or transportation of milk are cleaned after each milking or once every 24 hours for continuous operations.

3. There shall be no partial removal of milk from milk storage/holding tanks by the bulk milk hauler/sampler, except partial pickups may be permitted when the milk storage/holding tank is equipped with a seven-day recording device complying with the specifications of Appendix H or other recording device acceptable to the state regulatory agency provided the milk storage/holding tank shall be clean and sanitized when empty and shall be emptied at least every 72 hours. In the absence of a temperature recording device, partial pickups may be permitted as long as the milk storage/holding tank is completely empty, clean and sanitized prior to the next milking. In the event of an emergency situation, such as in inclement weather, natural disaster, et cetera, a variance may be permitted at the discretion of the state regulatory agency.

ITEM 11r. UTENSILS AND EQUIPMENT--SANITIZATION

The product-contact surfaces of all multi-use containers, equipment and utensils used in the handling, storage or transportation of milk shall be sanitized before each usage.

PUBLIC-HEALTH REASON

Mere cleaning of containers, equipment and utensils does not insure the removal or destruction of all disease organisms which may have been present. Even very small numbers remaining may grow to dangerous proportions, since many kinds of disease bacteria grow rapidly in milk. For this reason, all milk containers, equipment and utensils must be treated with an effective sanitizer before each usage.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

All product-contact surfaces of multi-use containers, utensils and equipment used in the handling, storage or transportation of milk are sanitized before each usage by one of the following methods, or by any method which has been demonstrated to be equally effective:

1. Complete immersion in hot water at a temperature of at least 77°C (170°F) for at least 5 minutes; or exposure to a flow of hot water at a temperature of at least 77°C (170°F), as determined by the use of a suitable accurate thermometer (at the outlet), for at least 5 minutes.

2. Certain chemical compounds are effective for the sanitization of milk utensils, containers, and equipment. These are contained in 21 CFR 178.1010. and shall be used in accordance with label directions. (See Appendix F, for further discussion of approved sanitizing procedures).

ITEM 12r. UTENSILS AND EQUIPMENT--STORAGE

All containers, utensils and equipment used in the handling, storage or transportation of milk, unless stored in sanitizing solutions, shall be stored to assure complete drainage and shall be protected from contamination prior to use. *Provided*, that pipeline milking equipment such as milker claws, inflations, weigh jars, meters, milk hoses, milk receivers, tubular coolers, plate coolers and milk pumps which are designed for mechanical cleaning and other equipment, as accepted by FDA which

meets these criteria, may be stored in the milking barn or parlor, provided this equipment is designed, installed and operated to protect the product and solution-contact surfaces from contamination at all times.

PUBLIC-HEALTH REASON

Careless storage of milk utensils which previously have been properly treated is apt to result in recontamination of such utensils, thus rendering them unsafe.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. All milk containers, utensils and equipment, including milking machine vacuum hoses, are stored in the milkhouse in a sanitizing solution, or on racks, until used. Pipeline milking equipment such as milker claws, inflations, weight jars, milk hoses, milk receivers, tubular coolers, plate coolers and milk pumps which are designed for mechanical cleaning and other equipment, as accepted by FDA which meets these criteria, may be mechanically cleaned, sanitized and stored in the milking barn or parlor, provided this equipment is designed, installed and operated to protect the product- and solution-contact surface from contamination at all times. Some of the parameters to be considered in determining protection are: proper location of equipment; proper drainage of equipment; and adequate and properly located lighting and ventilation. The milking barn or parlor must be used only for milking. Concentrates may be fed in the barn during milking but the barn shall not be used for the housing of animals. When manual cleaning of product-contact surfaces is necessary, the cleaning shall be done in the milkhouse.

2. Means are provided to effect complete drainage of equipment when such equipment cannot be stored to drain freely.

3. Clean cans or other containers are stored in the milkhouse within a reasonable time after delivery to the dairy farm.

4. Strainer pads, parchment papers, gaskets and similar single-service articles are stored in a suitable container or cabinet and protected against contamination and in a location convenient to their use.

ITEM 13r. MILKING--FLANKS, UDDERS AND TEATS

Milking shall be done in the milking barn, stable or parlor. The flanks, udders, bellies and tails of all milking lactating animals shall be free from visible dirt. All brushing shall be completed prior to milking. The udders and teats of all milking lactating animals shall be clean and dry before milking. Teats shall be treated with a sanitizing solution just prior to the time of milking and shall be dry before milking. Wet hand milking is prohibited.

PUBLIC-HEALTH REASON

If milking is done elsewhere other than in a suitable place provided for this purpose, the milk may become contaminated. Cleanliness of the lactating animals is one of the most important factors affecting the bacterial count of the milk. Under usual farm conditions, lactating animals contaminate their udders by standing in polluted water or by lying down in the pasture or cowyard. Unless the udders and teats are clean and dry before milking, particles of filth or contaminated water are apt to drop or be drawn into the milk. Such contamination of the milk is particularly dangerous because manure may contain the organisms of brucellosis and tuberculosis, and polluted water may contain

the organisms of typhoid fever and other intestinal diseases. Application of sanitizing solutions to the teats followed by thorough drying just prior to the time of milking has the advantage of giving an additional margin of safety with reference to such disease organisms as are not removed by ordinary cleaning and it is helpful in the control of mastitis.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Milking is done in a milking barn, stable or parlor.
2. Brushing is completed prior to milking.
3. Flanks, bellies, tails and udders are clipped as often as necessary to facilitate cleaning of these areas and are free from dirt. The hair on the udders shall be of such length that it is not incorporated with the teat in the inflation during milking.
4. Udders and teats of all milking animals are clean and dry before milking. Teats shall be cleaned, treated with a sanitizing solution and dry just prior to milking, except that additional alternative udder preparation methods may also be used once they have been evaluated by FDA and found acceptable.
5. Wet hand milking is prohibited.

ITEM 14r. PROTECTION FROM CONTAMINATION

Milking and milkhouse operations, equipment and facilities shall be located and conducted to prevent any contamination of milk, equipment, containers and utensils. No milk shall be strained, poured, transferred or stored unless it is properly protected from contamination.

After sanitization, all containers, utensils and equipment shall be handled in such a manner as to prevent contamination of any product-contact surface.

Vehicles used to transport milk from the dairy farm to the milk plant receiving station or transfer station shall be constructed and operated to protect their contents from sun, freezing and contamination. Such vehicles shall be kept clean, inside and out, and no substance capable of contaminating the milk shall be transported with the milk.

PUBLIC-HEALTH REASON

Because of the nature of milk and its susceptibility to contamination by disease producing bacteria and other contaminants, every effort should be made to provide adequate protection for the milk at all times. This should include the proper placement of equipment so that work areas in the milking barn and milkhouse are not overcrowded. The quality of any air which is used for the agitation or movement of milk or is directed at a milk product-contact surface should be such that it will not contaminate the milk.

The effect of sanitization of equipment can be nullified if the equipment is not protected after sanitizing.

To protect milk during transportation, delivery vehicles must be properly constructed and operated.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Equipment and operations are so located within the milking barn and milkhouse as to prevent overcrowding and contamination of cleaned and sanitized containers, equipment and utensils by splash, condensation or manual contact.

2. During processing, pipelines and equipment, used to contain or conduct milk and milk products, shall be effectively separated from tanks or circuits containing cleaning and/or sanitizing solutions.

3. All milk which has overflowed, leaked, been spilled or improperly handled is discarded.

4. All product-contact surfaces of containers, equipment and utensils are covered or otherwise protected to prevent the access of insects, dust, condensation and other contamination. All openings, including valves and piping attached to milk storage and milk tank trucks, pumps or vats, shall be capped or otherwise properly protected. Gravity type strainers used in the milkhouse do not have to be covered. Milk pipelines used to convey milk from pre-coolers to the farm bulk tank must be fitted with effective drip deflectors.

5. The receiving receptacle is raised above the floor (as on a dolly or cart), or placed at a distance from the lactating animals, to protect it against manure and splash when milk is poured and/or strained in the milking. Such receptacle shall have a tight-fitting cover, which shall be closed except when milk is being poured.

6. Each pail or container of milk is transferred immediately from the milking barn, stable or parlor to the milkhouse.

7. Pails, cans and other equipment containing milk are properly covered during transfer and storage.

8. Whenever air under pressure is used for the agitation or movement of milk, or is directed at a milk-contact surface, it is free of oil, dust, rust, excessive moisture, extraneous materials and odor, and shall otherwise comply with the applicable standards of Appendix H.

9. Sanitized product-contact surfaces, including farm cooling holding tank openings and outlets, are protected against contact with unsanitized equipment and utensils, hands, clothing, splash, condensation and other sources of contamination.

10. Any sanitized product-contact surface, which has been otherwise exposed to contamination, is again cleaned and sanitized before being used.

11. Vehicles used to transport milk from the dairy farm to the milk plant, receiving station or transfer station are constructed and operated to protect their contents from sun, freezing and contamination.

12. Vehicles have bodies with solid enclosures and tight, solid doors.

13. Vehicles are kept clean, inside and out.

14. No substance capable of contaminating milk is transported with the milk.

Note: See items 10p and 11p for information on the construction of milk tank trucks.

ITEM 15r. DRUG AND CHEMICAL CONTROL

Cleaners and sanitizers shall be stored in properly identified, dedicated end use containers.

Animal drugs and medications and animal drug and medication administration equipment shall be stored in such a way that milk, milking equipment, wash vats and hand sinks are not subject to contamination.

Animal drugs and medications shall be properly labeled and segregated (lactating from non-lactating).

Unapproved drugs shall not be used.

PUBLIC-HEALTH REASON

Accidental misuse of cleaners or sanitizers can result in adulteration of the milk.

Animal drug or medications can result in adverse reactions in people sensitive to those residues and can contribute to the development of strains of drug resistant human pathogens.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Cleaners and sanitizers, used on dairy farms, shall be purchased in containers from the manufacturer or distributor which properly identify the contents or, if bulk cleaners and sanitizers are transferred from the manufacturer's or distributor's container, that the transfer only occur into a dedicated end-use container which is specifically designed and maintained according to the manufacturer's specifications for that specific product. The label on the dedicated end-use container shall include the product name, chemical description, use directions, precautionary and warning statement, first aid instructions, container storage and maintenance instructions and the name and address of the manufacturer or distributor.

2. Equipment used to administer medicinals/drugs is not cleaned in the wash vats and is stored so as not to contaminate the milk or milk contact surfaces of equipment.

3. Medicinals/drugs intended for treatment of non-lactating dairy animals are segregated from those medicinals/ drugs used for lactating animals. (Separate shelves in cabinets, refrigerators or other storage facilities satisfies this item).

4. Drugs and medicinals shall be properly labeled to include the name and address of the manufacturer or distributor (for OTC medicinals/drugs), or veterinary practitioner dispensing the product (for Rx and extra label use medicinals/drugs).

5. Drugs and medicinal labels shall also include:

   a. Directions for use, and prescribed withholding times;

   b. Cautionary statements, if needed; and

   c. Active ingredient(s) in the drug product.

6. Unapproved and/or improperly labeled medicinals/drugs are not used to treat dairy animals and are not stored in the milkhouse, milking barn, stable or parlor.

7. Drugs and medicinals are stored in such a manner that they cannot contaminate the milk or milk product-contact surface of the equipment, containers or utensils.

NOTE: Topical antiseptics, wound dressings (unless intended for direct injection into the teat), vaccines and other biologics, and dosage form vitamins and/or mineral products are exempt from labeling and storage requirements except when it is determined that they are stored in such a manner that they may contaminate the milk or milk product surfaces of containers or utensils.

ITEM 16r. PERSONNEL--HAND-WASHING FACILITIES

Adequate hand-washing facilities shall be provided, including a lavatory fixture with hot and cold, or warm running water, soap or detergent and individual sanitary towels, convenient to the milkhouse, milking barn, stable, parlor and flush toilet.

PUBLIC-HEALTH REASON

The hands of the milker in his preparation for milking come into contact with almost identically the same kind of material as may have contaminated the udders. During the course of their duties and natural habits outside of the milking barn, the milker's hands must be assumed to have been exposed to body discharges. Washing facilities are required in order to increase the assurance that milker's hands will be washed.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Hand-washing facilities are located convenient to the milkhouse, milking barn, stable, parlor and flush toilet.
2. Hand-washing facilities include soap or detergent, hot and cold, or warm running water, individual sanitary towels and a lavatory fixture. Utensil wash and rinse vats shall not be considered as hand-washing facilities.

ITEM 17r. PERSONNEL--CLEANLINESS

Hands shall be washed clean and dried with an individual sanitary towel immediately before milking, before performing any milkhouse function and immediately after the interruption of any of these activities. Milkers and bulk milk hauler/samplers shall wear clean outer garments while milking or handling milk, milk containers, utensils, or equipment.

PUBLIC-HEALTH REASON

The reasons for clean hands of the persons doing the milking are similar to those for the cleanliness of the lactating animal's udder. The milker's hands must be assumed to have been exposed to contamination during the course of his normal duties on the farm and at milking time. Because the hands of all workers frequently come into contact with their clothing it is important that the clothes worn, during milking and the handling of milk, be clean.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Hands are washed, clean and dried with an individual sanitary towel immediately before milking; before performing any milkhouse function; and immediately after the interruption of any of these activities.
2. Milkers and bulk milk hauler/samplers wear clean outer garments while milking or handling milk, milk containers, utensils; or equipment.

ITEM 18r. RAW MILK COOLING

Raw milk for pasteurization shall be cooled to 10°C (50°F) or less within 4 hours or less of the commencement of the first milking and to7°C (45°F) or less within 2 hours after the completion of milking. *Provided*, that the blend temperature after the first milking and subsequent milkings does not exceed 10°C (50°F).

PUBLIC-HEALTH REASON

Milk produced by disease-free lactating animals and under clean conditions usually contains relatively few bacteria immediately after milking. These can multiply to enormous numbers in a few hours unless the milk is cooled. However when the milk is cooled quickly to 7°C

(45°F) or less, there is only a slow increase in the numbers of bacteria.

Usually, the bacteria in milk are harmless, and if this were always true there would be no reason to cool milk, except to delay souring. There is; however, no way for the dairyman or regulating officer to be absolutely sure that no disease bacteria have entered the milk, even though observance of the other items of this *Ordinance* will greatly reduce this likelihood. The likelihood of transmitting disease is much increased when the milk contains large numbers of disease bacteria. Therefore, it is extremely important for milk to be cooled quickly, so that small numbers of bacteria, which may have entered, will not multiply.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Raw milk for pasteurization shall be cooled to 10°C (50°F) or less within 4 hours or less of the commencement of the first milking and to7°C (45°F) or less within 2 hours after the completion of milking. *Provided*, that the blend temperature after the first milking and subsequent milkings does not exceed 10°C (50°F).

2. Recirculated cold water which is used in plate or tubular coolers or heat exchangers is from a safe source and protected from contamination. Such water shall be tested semiannually and shall comply with the bacteriological standards of Appendix G.

3. All farm bulk milk tanks manufactured after January 1, 2000 shall be equipped with an approved temperature recording device.

   a. The recording device shall be operated continuously and be maintained in a properly functioning manner. Circular charts shall not overlap.
   b. The recording device shall be verified in a manner acceptable to the regulatory agency by a traceable standard thermometer.
   c. Recording thermometer charts shall be maintained on the premises for a period of a minimum of six (6) months and available to the regulatory agency.
   d. The recording thermometer should be installed in an area convenient to the milk storage tank and acceptable to the regulatory agency.
   e. The recording thermometer sensor shall be located to permit the registering of the temperature of the contents when the tank contains no more than ten percent (10%) of its calibrated capacity.
   f. The recording thermometer shall comply with the current technical specifications for tank recording thermometers.
   g. A recording thermometer and/or any other device that meets the intent of these administrative procedures and technical specifications and is acceptable to the regulatory agency can be used to monitor/record the bulk tank temperature.
   h. The recording thermometer charts shall properly identify the producer, date, and signature of the person removing the chart.

The information from recording thermometer charts on farm bulk milk tanks shall not be used for enforcement purposes except in cases where an imminent health hazard exists or be

debited on state ratings or FDA check ratings until 12-01-01.

In addition, during the interim period, information should be forwarded by states, FDA and the industry to a NCIMS Committee approved by the Executive Board for recommendation to the next NCIMS Conference of appropriate procedures to be taken in areas of enforcement, debits and responsibilities of administration surrounding the use of recording thermometers on farm bulk milk tanks.

ITEM 19r. INSECT AND RODENT CONTROL

Effective measures shall be taken to prevent the contamination of milk, containers, equipment and utensils by insects and rodents and by chemicals used to control such vermin. Milk rooms shall be free of insects and rodents. Surroundings shall be kept neat, clean and free of conditions which might harbor or be conducive to the breeding of insects and rodents. Feed shall be stored in such a manner that it will not attract birds, rodents or insects.

PUBLIC HEALTH REASON

Proper manure disposal reduces the breeding of flies, which are considered capable of transmitting infection by physical contact or through excreta to milk or milk utensils. Flies visit insanitary places, they may carry disease organisms on their bodies and they may carry living bacteria for as long as 4 weeks within their bodies, and they may pass them on to succeeding generations by infecting their eggs. Effective screening tends to prevent the presence of flies, which are a public health menace. Flies may contaminate the milk with disease germs, which may multiply and become sufficiently numerous to present a public health hazard. The surroundings of a dairy should be kept neat and clean to encourage cleanliness and reduce insect and rodent harborages.

ADMINISTRATIVE PROCEDURES

This item is deemed to be satisfied when:

1. Surroundings are kept neat, clean and free of conditions which might harbor or be conducive to the breeding of insects and rodents. During fly season, manure shall be spread directly on the fields; or stored for not more than 4 days in a pile on the ground surface and then spread on the fields; or stored for not more than 7 days in an impervious-floored bin, or on an impervious-curbed platform and then spread; or stored in a tight-screened and trapped manure shed; or effectively treated with larvicides; or disposed of in any other manner which controls insect breeding.

2. Manure packs in loafing areas, stables without stanchions, pen stables, resting barns, wandering sheds and free-stall housing are properly bedded and managed to prevent fly breeding.

3. Milkrooms are free of insects and rodents.

4. Milkrooms are effectively screened or otherwise protected against the entrance of vermin.

5. Outer milkhouse doors are tight and self-closing. Screen doors shall open outward.

6. Effective measures are taken to prevent the contamination of milk, containers, utensils and equipment by insects and rodents and by chemicals used to control such vermin. Insecticides and rodenticides, not approved for use in the

milkhouse, shall not be stored in the milkhouse.

7. Only insecticides and rodenticides approved for use by the regulatory agency and/or registered with the U.S. Environmental Protection Agency, are used for insect and rodent control. (See Appendix C, for further information about insect and rodent control.)

8. Insecticides and rodenticides are used only in accordance with manufacturer's label directions and are used so as to prevent the contamination of milk, milk containers, equipment, utensils, feed and water.

9. Have covered boxes, bins or separate storage facilities for ground, chopped or concentrated feed.

10. Feed may be stored in the milking portion of the barn only in such a manner as will not attract birds, flies or rodents. Open feed dollies or carts may be used for distributing the feed, but not storing feed, in the milking barn. Feed dollies, carts, fully automated feeding systems, or other feed containers may be exempt from the use of covers provided, they do not attract birds, insects, or rodents.

NOTE:: A convenient inspection form for producer dairy farms, which summarizes the applicable sanitation requirements is found in Appendix M.

STANDARDS FOR GRADE "A" PASTEURIZED, ULTRA-PASTEURIZED AND ASEPTICALLY PROCESSED MILK AND MILK PRODUCTS

A receiving station shall comply with Items 1p to 15p, inclusive, and 17p, 20p and 22p, except that the partitioning requirement of Item 5p shall not apply.

A transfer station shall comply with Items 1p, 4p, 6p, 7p, 8p, 9p, 10p, 11p, 12p, 14p, 15p, 20p and 22p and as climatic and operating conditions require, the applicable provisions of Items 2p and 3p. *Provided*, that in every case, overhead protection shall be provided.

Facilities for the cleaning and sanitizing of milk tank trucks shall comply with Items 1p, 4p, 6p, 7p, 8p, 9p, 10p, 11p, 12p, 14p, 15p, 20p and 22p and as climatic and operating conditions require, the applicable provisions of Items 2p and 3p. *Provided*, that in every case, overhead protection shall be provided.

ITEM 1p. FLOORS--CONSTRUCTION

The floors of all rooms in which milk or milk products are processed, handled or stored, or in which milk containers, equipment and utensils are washed, shall be constructed of concrete or other equally impervious and easily cleanable material; and shall be smooth, properly sloped, provided with trapped drains and kept in good repair. *Provided*, that cold-storage rooms used for storing milk and milk products need not be provided with floor drains when the floors are sloped to drain to one or more exits. *Provided further,* that storage rooms for storing dry ingredients and/or packaging materials need

APPENDIX D. STANDARDS FOR WATER SOURCES

I. LOCATION OF WATER SOURCES

DISTANCE FROM SOURCES OF CONTAMINATION

All ground water sources should be located a safe distance from sources of contamination. In cases where sources are severely limited; however, a ground water aquifer that might become contaminated may be considered for a water supply, if treatment is provided. After a decision has been made to locate a water source in an area, it is necessary to determine the distance the source should be placed from the origin of contamination and the direction of water movement. A determination of a safe distance is based on specific local factors described in the section on "Sanitary Survey."

Because many factors affect the determination of "safe" distances between ground water supplies and sources of pollution, it is impractical to set fixed distances. Where insufficient information is available to determine the "safe" distance, the distance should be the maximum that economics, land ownership, geology and topography will permit. It should be noted that the direction of ground water flow does not always follow the slope of the land surface. Each installation should be inspected by a person with sufficient training and experience to evaluate all of the factors involved.

Since safety of a ground water source depends primarily on considerations of good well construction and geology, these factors should be the guides in determining safe distances for different situations. The following criteria apply only to properly constructed wells, as described in this appendix. There is no safe distance for a poorly constructed well.

When a properly constructed well penetrates an unconsolidated formation, with good filtering properties, and when the aquifer itself is separated from sources of contamination by similar materials, research and experience have demonstrated that 15 meters (50 feet) is an adequate distance separating the two. Lesser distances should be accepted, only after a comprehensive sanitary survey, conducted by qualified State or local health agency officials, has satisfied the officials that such lesser distances are both necessary and safe.

If it is proposed to install a properly constructed well in formations of unknown character, the State or U.S. Geological Survey and the State or local health agency should be consulted.

When wells must be constructed in consolidated formations, extra care should always be taken in the location of the well and in setting "safe" distances, since pollutants have been known to travel great distances in such formations. The owner should request assistance from the State or local health agency.

The following table is offered as a guide in determining distances:

Table 10. Distance of Well from Sources of Contamination	
Formation	**Minimum Acceptable Distance of Well from Sources of Contamination**
Favorable (Unconsolidated)	15 meters (50 feet) – Lesser distances only on health department approval following comprehensive sanitary survey of proposed site and immediate surroundings.
Unknown	15 meters (50 feet) – Only after comprehensive geological survey of the site and its surroundings has established, to the satisfaction of the health agency, that favorable formations do exist.
Poor (Consolidated)	Safe distances can be established only following both the comprehensive geological and comprehensive sanitary surveys. These surveys also permit determining the direction in which a well may be located with respect to sources of contamination. In no case should the acceptable distance be less than 15 meters (50 feet).

EVALUATING CONTAMINATION THREATS TO WELLS

Conditions unfavorable to the control of contamination and that may require specifying *greater* distances between a well and sources of contamination are:

1. **Nature of the Contaminant:** Human and animal excreta and toxic chemical wastes are serious health hazards. Salts, detergents and other substances that dissolve in water can mix with ground water and travel with it. They are not ordinarily removed by natural filtration.

2. **Deeper Disposal:** Cesspools, dry wells, disposal and waste injection wells and deep leaching pits that reach aquifers or reduce the amount of filtering earth materials between the wastes and the aquifer increase the danger of contamination.

3. **Limited Filtration:** When earth materials surrounding the well and overlying the aquifer are too coarse to provide effective filtration, as in limestone, coarse gravel, etc., or when they form a layer too thin, the risk of contamination is increased.

4. **The Aquifer:** When the materials of the aquifer itself are too coarse to provide good filtration, as in limestone, fractured rock, etc., contaminants entering the aquifer through outcrops or excavations may travel great distances. It is especially important in such cases to know the direction of ground water flow and whether there are outcrops of the formation (or excavations reaching it) "upstream" and close enough to be a threat.

5. **Volume of Waste Discharged:** Since greater volumes of wastes discharged and reaching an aquifer can significantly change the slope of the water table and the direction of ground water flow, it is obvious that heavier discharges can increase the threat of contamination.

6. **Contact Surface:** When pits and channels are designed and constructed to increase the rate of absorption, as in septic tank leaching systems, cesspools and leaching pits, more separation from the

water source will be needed than when tight sewer lines or waste pipes are used.

7. **Concentration of Contamination Sources:** The existence of more than one source of contamination, contributing to the general area, increases the total pollution load and, consequently, the danger of contamination.

SANITARY SURVEY

The importance of a sanitary survey of water sources cannot be overemphasized. With a new supply, the sanitary survey should be made in conjunction with the collection of initial engineering data, covering the development of a given source and its capacity to meet existing and future needs. The sanitary survey should include the detection of all health hazards and the assessment of their present and future importance. Persons trained and competent in public health engineering and the epidemiology of waterborne diseases should conduct the sanitary survey. In the case of an existing supply, the sanitary survey should be made at a frequency compatible with the control of the health hazards and the maintenance of a good sanitary quality.

The information furnished by the sanitary survey is essential to complete the interpretation of bacteriological and frequently the chemical data. This information should always accompany the laboratory findings. The following outline covers the essential factors which should be investigated or considered in a sanitary survey. Not all of the items are pertinent to any one supply and, in some cases, items not in the list would be important additions to the survey list.

Ground Water Supplies:

a. Character of local geology and slope of ground surface.

b. Nature of soil and underlying porous strata; whether clay, sand, gravel, rock (especially porous limestone); coarseness of sand or gravel; thickness of water-bearing stratum; depth to water table and location, log and construction details of local wells in use and abandoned.

c. Slope of water table, preferably determined from observational wells or as indicated, presumptively, but not certainly, by the slope of ground surface.

d. Extent of drainage area likely to contribute water to the supply.

e. Nature, distance and direction of local sources of pollution.

f. Possibility of surface-drainage water entering the supply and of wells becoming flooded and methods of protection.

g. Methods used for protecting the supply against pollution by means of sewage treatment, waste disposal and the like.

g. Well construction:

(1) Total depth of well.

(2) Casing: diameter, wall thickness, material and lengths from surface.

(3) Screen or perforations: diameter, material, construction, locations and lengths.

(4) Formation seal: material (cement, sand, bentonite, etc.), depth intervals, annular thickness and method of placement.

i. Protection of well at top: presence of sanitary well seal, casing height above ground floor or flood level, protection of well vent and protection of well from erosion and animals.

j. Pumphouse construction (floors, drains, etc.), capacity of pumps and draw down when pumps are in operation.

k. Availability of an unsafe supply, usable in place of normal supply, hence involving danger to the public health.

l. Disinfection: equipment, supervision, test kits or other types of laboratory control.

Surface Water Supplies:

a. Nature of surface geology: character of soils and rocks.

b. Character of vegetation, forests, cultivated and irrigated land, including salinity, effect on irrigation water, etc.

c. Population and sewered population per square mile of catchment area.

d. Methods of sewage disposal, whether by diversion from watershed or by treatment.

e. Character and efficiency of sewage-treatment works on watershed.

f. Proximity of sources of fecal pollution to intake of water supply.

g. Proximity, sources and character of industrial wastes, oil field brines, acid mine waters, etc.

h. Adequacy of supply as to quantity.

i. For lake or reservoir supplies: wind direction and velocity data, drift of pollution and sunshine data (algae).

j. Character and quality of raw water: coliform organisms (MPN), algae, turbidity, color and objectionable mineral constituents.

k. Nominal period of detention in reservoirs or storage basin.

l. Probable minimum time required for water to flow from sources of pollution to reservoir and through reservoir intake.

m. Shape of reservoir, with reference to possible currents of water, induced by wind or reservoir discharge, from inlet to water-supply intake.

n. Protective measures in connection with the use of watershed to control fishing, boating, landing of airplanes, swimming, wading, ice cutting and permitting animals on marginal shore areas and in or upon the water, etc.

o. Efficiency and constancy of policing.

p. Treatment of water: kind and adequacy of equipment; duplication of parts; effectiveness of treatment; adequacy of supervision and testing; contact period after disinfection and free chlorine residuals carried.

q. Pumping facilities: pumphouse, pump capacity and standby units and storage facilities.

II. CONSTRUCTION

SANITARY CONSTRUCTION OF WELLS

The penetration of a water-bearing formation by a well provides a direct route for possible contamination of the ground water. Although there are different types of wells and well construction, there are basic sanitary aspects that must be considered and followed.

1. The annular space outside the casing shall be filled with a watertight cement grout or puddled clay from a point just below the frost line or deepest level of excavation near the well to as deep as necessary to prevent entry of contaminated water.

2. For artesian aquifers, the casing shall be sealed into the overlying impermeable formations so as to retain the artesian pressure.

3. When a water-bearing formation containing water of poor quality is

penetrated, the formation shall be sealed off to prevent the infiltration of water into the well and aquifer.

4. A sanitary well seal, with an approved vent, shall be installed at the top of the well casing to prevent the entrance of contaminated water or other objectionable material.

Well Casing or Lining: All that part of the suction pipe or drop pipe of any well within 3 meters (10 feet) of and below the ground surface shall be surrounded by a watertight casing pipe extending above the ground, platform or floor surface, as the case maybe, and covered at the top as herein provided. The casing of every well shall terminate above the ground level; the annular space outside the casing shall be filled with a watertight cement grout or clay, with similar sealing properties, from the surface to a minimum of 3 meters (10 feet) below the ground surface. A dug well, in lieu of a casing pipe, may be provided with a substantial watertight lining of concrete, vitrified tile with outer concrete lining, or other suitable material. Such lining shall extend at least 3 meters (10 feet) below the surface and shall extend up to the well platform or pump room floor with a watertight connection. In such case, the platform or floor shall have a suitable sleeve pipe, surrounding the suction pipe or drop pipe, and projecting above as herein provided for a casing pipe.

Well Covers and Seals: Every well shall be provided with an overlapping, tight-fitting cover at the top of the casing or pipe sleeve to prevent contaminated water or other material from entering the well.

The sanitary well seal, in a well exposed to possible flooding, shall be either watertight or elevated at least .6 meters (2 feet) above the highest known flood level. When it is expected that a well seal may become flooded, it shall be watertight and equipped with a vent line, whose opening to the atmosphere, is at least .6 meters (2 feet) above the highest known flood level.

The seal in a well not exposed to possible flooding shall be either watertight (with an approved vent line) or self-draining, with an overlapping and downward flange. If the seal is of the self-draining (non-watertight) type, all openings in the cover should be either watertight or flanged upward and provided with overlapping, downward flanged covers.

Some pump and power units have closed bases that effectively seal the upper terminal of the well casing. When the unit is the open type, or when it is located at the side (some jet- and suction-pump-type installations), it is especially important that a sanitary well seal be used. There are several acceptable designs consisting of an expandable neoprene gasket, compressed between two steel plates. They are easily installed and removed for well servicing. Pump and water well suppliers normally stock sanitary well seals.

If the pump is not installed immediately after well drilling and placement of the casing, the top of the casing should be closed with a metal cap screwed or tack welded into place, or covered with a sanitary well seal.

For large-diameter wells such as dug wells, it would be difficult to provide a sanitary well seal, consequently, a reinforced concrete slab, overlapping the casing and sealed to it with a flexible seal and/or rubber gasket, should be installed. The annular space outside the casing should first be filed with suitable grouting or sealing materials, i.e., cement, clay, or fine sand.

A well slab alone is not an effective sanitary defense, since it can be undermined by burrowing animals and insects, cracked from settlement or frost heave or broken by vehicles and vibrating machinery. The

cement grout formation seal is far more effective. It is recognized; however, that there are situations that call for a concrete slab or floor around the well casing to facilitate cleaning and improve appearance. When such a floor is necessary, it shall be placed only after the formation seal and the pitless installation have been inspected.

Well covers and pump platforms shall be elevated above the adjacent finished ground level. Pump room floors shall be constructed of reinforced, watertight concrete and carefully leveled or sloped away from the well, so that surface and waste water cannot stand near the well. The minimum thickness of such a slab or floor shall be 10 centimeters (4 inches). Concrete slabs or floors shall be poured separately from the cement formation seal and when the threat of freezing exists, insulated from it and the well casing by a plastic or mastic coating or sleeve to prevent bonding of the concrete to either.

All water wells shall be readily accessible at the top for inspection, servicing and testing. This requires that any structure over the well be easily removable to provide full, unobstructed access for well servicing equipment. The so-called "buried seal," with the well cover buried under several meter (yards) of earth, is unacceptable because:

1. It discourages periodic inspection and preventive maintenance;
2. It makes severe contamination during pump servicing and well repair more likely;
3. Any well servicing is more expensive; and
4. Excavation to expose the top of the well increases the risk of damage to the well, the cover, the vent and the electrical connections.

Well Pits and Drainage: Because of the pollution hazards involved, the well head, well casing, pump, pumping machinery, valve connected with the suction pump or exposed suction pipe shall not be permitted in any pit, room or space extending below ground level, or in any room or space above the ground, which is walled-in or otherwise enclosed, so that it does not have free drainage by gravity to the surface of the ground. *Provided,* that a dug well properly constructed, lined and covered, as herein prescribed, shall not be construed to be a pit. *Provided further,* that pumping equipment and appurtenances may be located in a residential basement, which is not subject to flooding. *And provided further,* that in the case of existing water supplies which otherwise comply with the applicable requirements of this appendix, pit installations may be accepted, under the following conditions, when permitted by the State water-control authority:

1. Pits shall be of watertight construction, with walls extending at least 15 centimeters (6 inches) above the established ground surface at all points.
2. Pits shall be provided with a watertight, concrete floor, sloping to a drain which discharges to the ground surface at a lower elevation than the pit, and preferably at least 9 meters (30 feet) from it; or if this should be impossible, to a watertight, concrete sump, in the pit, equipped with a sump-pump discharging to the ground surface, preferably at least 9 meters (30 feet) from the pit.
3. Pits shall be provided with a concrete base for pumps or pumping machinery, so that such units shall be located at least 30 centimeters (12 inches) above the floor of the pit.
4. Pits shall be provided with a watertight housing or cover in all cases.
5. If inspection should reveal that these conditions are not being properly maintained, the supply shall be disapproved.

Manholes: Manholes may be provided on dug wells, reservoirs, tanks and other similar features of water supplies. A manhole, if installed, shall be provided with a curb, the top of which extends at least 10 centimeters (4 inches) above the slab and shall be equipped, where necessary for physical protection, with a locked or bolted overlapping watertight cover. The sides of which extend downward at least 5 centimeters (2 inches). The covers shall be kept closed at all times, except when it may be necessary to open the manhole.

Vent Opening: Any reservoir, well, tank or other structure containing water for the dairy water supply may be provided with vents, overflows, or water-level control gauges, which shall be so constructed as to prevent the entrance of birds, insects, dust, rodents or contaminating material of any kind. Openings on vents shall be not less than 46 centimeters (18 inches) above the floor of a pump room, or above the roof or cover of a reservoir. Vent openings on other structures shall be at least 46 cm (18 inches) above the surface on which the vents are located. Vent openings shall be turned down and screened with corrosion-resistant screen of not less than 16 x 20 mesh. Overflow outlets shall discharge above and not less than 6 inches from a roof, roof drain, floor, floor drain or over an open water-supplied fixture. The overflow outlet shall be covered by a corrosion-resistant screen of not less than 16 x 20 mesh and by .6 centimeters (1/4-inch) hardware cloth, or shall terminate in a horizontal angle seat check valve.

DEVELOPMENT OF SPRINGS

There are two general requirements necessary in the development of a spring, used as a source of domestic water.

1. Selection of a spring with adequate capacity to provide the required quantity and quality of water for its intended use throughout the year.
2. Protection of the sanitary quality of the spring. The measures taken to develop a spring must be tailored to its geological conditions and sources.

The features of a spring encasement are the following:

1. An open-bottom, watertight basin intercepting the source which extends to bedrock or a system of collection pipes and a storage tank;
2. A cover that prevents the entrance of surface drainage or debris into the storage tank;
3. Provisions for the cleanout and emptying of the tank contents;
4. Provision for overflow; and
5. A connection to the distribution system or auxiliary supply. (See Figure 12).

A tank is usually constructed in place with reinforced concrete, of such dimensions, as to enclose or intercept as much of the spring as possible. When a spring is located on a hillside, the downhill wall and sides are extended to bedrock or to a depth that will insure maintenance of an adequate water level in the tank. Supplementary cutoff walls, of concrete or impermeable clay, extending laterally from the tank may be used to assist in controlling the water table in the locality of the tank. The lower portion of the uphill wall of the tank can be constructed of stone, brick or

other material, so placed that water may move freely into the tank from the formation. Backfill of graded gravel and sand will aid in restricting movement of fine material from the formation toward the tank.

The tank cover shall be cast in place to insure a good fit. Forms should be designed to allow for shrinkage of concrete and expansion of form lumber. The cover shall extend down over the top edge of the tank at least 5 centimeters (2 inches). The tank cover shall be heavy enough so that it cannot be dislodged by children and shall be equipped for locking.

A drain pipe with an exterior valve shall be placed close to the wall of the tank near the bottom. The pipe shall extend horizontally so as to clear the normal ground level at the point of discharge by at least 15 centimeters (6 inches). The discharge end of the pipe shall be screened to prevent the entrance of rodents and insects.

The overflow is usually placed slightly below the maximum water-level elevation and screened. A drain apron of rock shall be provided to prevent soil erosion at the point of overflow discharge.

The supply outlet, from the developed spring, shall be located at least 15 cm (6 inches) above the drain outlet and properly screened. Care shall be taken in casting pipes into the walls of the tank to insure good bond with the concrete and freedom from honeycomb around the pipes.

SANITARY PROTECTION OF SPRINGS

Springs usually become contaminated when barnyards, sewers, septic tanks, cesspools or other sources of pollution are located on higher adjacent land. In limestone formations; however, contaminated material frequently enters the water-bearing channels through sink holes or other large openings and may be carried along with ground water for long distances. Similarly, if material from such sources of contamination finds access to the tubular channels in glacial drift, this water may retain its contamination for long periods of time and for long distances.

The following precautionary measures will help to insure developed spring water of consistently high quality:

1. Provide for the removal of surface drainage from the site. A surface drainage ditch shall be located uphill from the source so as to intercept surface-water runoff and carry it away from the source. Location of the ditch and the points at which the water should be discharged are a matter of judgement. Criteria used should include the topography, the subsurface geology, land ownership and land use.
2. Construct a fence to prevent entry of livestock. Its location should be guided by the considerations mentioned in item 1. The fence shall exclude livestock from the surface-water drainage system at all points uphill from the source.
3. Provide for access to the tank for maintenance, but prevent removal of the cover by a suitable locking device.
4. Monitor the quality of the spring water with periodic checks for contamination. A marked increase in turbidity or flow after a rainstorm is a good indication that surface runoff is reaching the spring.

SURFACE WATER

The selection and use of surface water sources, for individual water supply systems, require consideration of additional factors not usually associated with ground water sources. When small streams, open ponds, lakes or open reservoirs must be used as sources of water supply, the danger of contamination and the consequent spread of

enteric diseases, such as typhoid fever and dysentery is increased. As a rule, surface water shall be used only when ground water sources are not available or are inadequate. Clear water is not always safe, and the old saying that running water "purifies itself", to drinking water quality, within a stated distance is false.

The physical and bacteriological contamination of surface water makes it necessary to regard such sources of supply as unsafe for domestic use, unless reliable treatment, including filtration and disinfection, is provided.

The treatment of surface water to insure a constant, safe supply requires diligent attention to operation and maintenance by the owner of the system.

When ground water sources are limited, consideration shall be given to their development for domestic purposes only. Surface water sources can then provide water needed for stock and poultry watering, gardening, fire-fighting and similar purposes. Treatment of surface water used for livestock is not generally considered essential. There is; however, a trend to provide stock and poultry drinking water which is free from bacterial contamination and certain chemical elements.

Where resort must be made to surface water for all uses, a wide variety of sources, including farm ponds, lakes, streams and the roof runoff of buildings may be considered. These sources are regarded, without exception, to be contaminated, and their use cannot be condoned unless an individually tailored treatment process can be used, which will make them safe and satisfactory. Such treatment may include aeration and the use of suitable filtration or precipitation devices to remove suspended matter, in addition to routine full-time disinfection.

The milk producer or milk plant operator, who is considering surface sources of water for milking, milkhouse and milk plant operations shall receive the advance approval of the regulatory agency and shall comply with all applicable requirements of the State water control authority on the construction, protection and treatment of the chosen supply.

NOTE: The U. S. Environmental Protection Agency publishes a *Manual of Individual Water Supply Systems* which is an excellent source of detailed information on the development, construction and operation of individual water systems and also contains a suggested well-drilling code.

III. DISINFECTION OF WATER SOURCES

All newly constructed or newly repaired wells shall be disinfected to counteract contamination introduced during construction or repair. Every well shall be disinfected immediately after construction or repair and flushed prior to bacteriological testing.

An effective and economical method of disinfecting wells and appurtenances is the use of calcium hypochlorite, containing approximately 70 percent available chlorine. This chemical can be purchased in granular form at hardware stores, swimming pool equipment supply outlets or chemical supply houses.

When used in the disinfection of wells, calcium hypochlorite should be added in sufficient amounts to provide a dosage of approximately 50 mg. available chlorine per liter in the well water. This concentration is roughly equivalent to a mixture of 1 gram (.03 ounce) of dry chemical per 13.5 liter (3.56 gallons) of water to be disinfected. A stock solution of disinfectant may be prepared by mixing 30 grams (1 ounce) of high-test hypochlorite with 2 liters (2 quarts)

of water. Mixing is facilitated if a small amount of the water is first added to the granular calcium hypochlorite and stirred to a smooth watery paste free of lumps. The stock solution should be stirred thoroughly for 10 to 15 minutes. The inert ingredients should then be allowed to settle. The liquid containing the chlorine should be used and the inert material discarded. Each 1.9 liter (2 quarts) of stock solution will provide a concentration of approximately 50 mg/l when added to 378 liters (100 gallons) of water. The solution should be prepared in a clean utensil. The use of metal containers should be avoided, as they are corroded by strong chlorine solutions. Crockery, glass or rubberlined containers are recommended.

Where small quantities of disinfectant are required and a scale is not available, the material can be measured with a spoon. A heaping tablespoonful of granular calcium hypochlorite weighs approximately 14 grams (1/2 ounce).

When calcium hypochlorite is not available, other sources of available chlorine such as sodium hypochlorite (12-15 percent of volume) can be used. Sodium hypochlorite, which is also commonly available as liquid household bleach with 5.25 percent available chlorine, can be diluted with two parts of water to produce the stock solution. 1.9 liter (2 quarts) of this solution can be used for disinfecting 378 liters (100 gallons) of water.

Stock solutions of chlorine in any form will deteriorate rapidly unless properly stored. Dark glass or plastic bottles with airtight caps are recommended. Bottles containing solution should be kept in a cool place and protected from direct sunlight. If proper storage facilities are not available, the solution should always be prepared fresh, immediately before use.

Complete information concerning the test for residual chlorine is included in the latest edition of *Standard Methods for the Examination of Water and Wastewater,* published by the American Public Health Association.

DUG WELLS

After the casing or lining has been completed, follow the procedure outlined below:

1. Remove all equipment and materials which will not form a permanent part of the completed structure.
2. Using a stiff broom or brush, wash the interior walls of the casing or lining with a strong solution (100 mg/l of chlorine) to insure thorough cleaning and sanitizing.
3. Place the cover over the well and pour the required amount of chlorine solution into the well through the manhole or pipe opening just before inserting the pump cylinder and drop-pipe assembly. The chlorine solution should be distributed over as much of the surface of the water as possible to obtain proper diffusion of the chemical through the water hose or pipeline as the line is being alternately raised and lowered. This method should be followed whenever possible.
4. Wash the exterior surface of the pump cylinder and drop pipe, with the chlorine solution, as the assembly is being lowered into the well.
5. After the pump has been set in position, pump water from the well and through the entire water distribution system to the milkroom until a strong odor of chlorine is noted.
6. Allow the chlorine solution to remain in the well for at least 24 hours.
7. After 24 hours or more have lapsed, flush the well to remove all traces of chlorine.

DRILLED, DRIVEN, AND BORED WELLS

After the casing or lining has been completed, follow the procedure outlined below:

1. Remove all equipment and materials which will not form a permanent part of the completed structure.
2. When the well is being tested for yield, the test pump should be operated until the well water is clear and as free from turbidity as possible.
3. After the testing equipment has been removed, slowly pour the required amount of chlorine solution into the well just before installing the permanent pumping equipment. Diffusion of the chemical with the well water may be facilitated as previously described.
4. Wash the exterior surface of the pump cylinder and drop pipe with chlorine solution as the assembly is being lowered into the well.
5. After the pump has been set in position, operate the pump until water discharge through the entire distribution system to waste has a distinct odor of chlorine. Repeat this procedure a few times, at 1-hour intervals, to insure complete circulation of the chlorine solution through the column of water in the well and the pumping equipment.
6. Allow the chlorine solution to remain in the well for at least 24 hours.
7. After 24 hours or more have elapsed, flush the well to remove all traces of chlorine. The pump should be operated until water discharged to waste is free from the chlorine odor.

In the case of deep wells having a high water level, it may be necessary to resort to special methods of introducing the disinfecting agent into the well so as to insure proper diffusion of chlorine throughout the well. The following method is suggested.

Place the granulated calcium hypochlorite in a short section of pipe capped at both ends. A number of small holes should be drilled through each cap or into the sides of the pipe. One of the caps should be fitted with an eye to facilitate attachment of a suitable cable. The disinfecting agent is distributed when the pipe section is lowered and raised throughout the depth of the water.

WATER-BEARING STRATA

Sometimes a well is encountered that does not respond to the usual methods of disinfection. A well like this has usually been contaminated by water that entered under sufficient head to displace water into the water-bearing formation. The displaced water carries contamination with it. The contamination that has been carried into the water-bearing formation can be eliminated or reduced by forcing chlorine into the formation. Chlorine may be introduced in a number of ways, depending on the construction of the well. In some wells, it is advisable to chlorinate the water and then add a considerable volume of a chlorine solution in order to force the treated water into the formation. When this procedure is followed, all chlorinated water should have a chlorine strength of approximately 50 mg/l. In other wells, such as the drilled well cased with standard weight casing pipe, it is entirely practicable to chlorinate the water, cap the well and apply a head of air. When air is alternately applied and released, a vigorous surging effect is obtained and chlorinated water is forced into the water bearing formation. In this procedure, the chlorine strength of the treated water, in the well, will be reduced by dilution as it mixes with the water in the water-bearing

formation. It is; therefore, advisable to double or triple the quantity of chlorine compound to be used so as to have a chlorine strength of 100 to 150 mg/l in the well as the surging process is started. After treating a well in this manner, it is necessary to flush it to remove the excess chlorine.

DISINFECTION OF SPRINGS

Springs and encasements should be disinfected by a procedure similar to that used for dug well. If the water pressure is not sufficient to raise the water to the top of the encasement, it may be possible to shut off the flow and thus keep the disinfectant in the encasement for 24 hours. If the flow cannot be shut off entirely, arrangements should be made to supply disinfectant continuously for as long a period as practicable.

DISINFECTION OF WATER DISTRIBUTION SYSTEMS

These instructions cover the disinfection of water distribution systems and attendant standpipes or tanks. It is always necessary to disinfect a water system before placing it in use under the following conditions:

1. Disinfection of a system which has been in service with raw or polluted water, preparatory to transferring the service to treated water.
2. Disinfection of a new system upon completion and preparatory to placing in operation with treated water or water of satisfactory quality.
3. Disinfection of a system after completion of maintenance and repair operations.

The entire system, including tank or standpipe, should be thoroughly flushed with water to remove any sediment which may have collected during operation with raw water. Following flushing, the system should be filled with a disinfecting solution of calcium hypochlorite and treated water. This solution is prepared by adding 550 grams (1.2 pounds) of high-test 70 percent calcium hypochlorite to each 3,785 liters (1,000 gallons) of water. A mixture of this kind provides a solution having not less than 100 mg/1 of available chlorine.

The disinfectant should be retained in the system, tank or standpipe, if included, for not less than 24 hours, then examined for residual chlorine and drained out. If no residual chlorine is found present, the process should be repeated. The system is next flushed with treated water and put into operation.

IV. CONTINUOUS WATER DISINFECTION

Water supplies which are otherwise deemed satisfactory, but which prove unable to meet the bacteriological standards prescribed herein, shall be subjected to continuous disinfection. The individual character of the supply shall be investigated and a treatment program developed which shall produce a safe supply as determined by bacteriological testing.

For numerous reasons, including economy, effectiveness, stability, ease of use and availability, chlorine is by far the most popular chemical agent employed for the disinfection of water supplies. This does not preclude the use of other chemicals or procedures demonstrated to be safe and effective. The amount necessary to provide adequate protection varies with the supply and the amount of organic and other oxidizable material which it contains. Proper disinfection can only be assured when a residual concentration of chlorine remains, for bactericidal activity, after the demands of these other substances are met.

In general, these factors exert the most important influences on the bactericidal efficiency of chlorine:

1. Free chlorine residual; the higher the residual, the more effective the disinfection and the faster the disinfection rate.
2. Contact time between the organism and the disinfectant; the longer the time, the more effective the disinfection.
3. Temperature of the water in which contact is made; the lower the temperature, the less effective the disinfection.
4. The pH of the water in which contact is made; the higher the pH, the less effective disinfection.

For example, when a high pH and low temperature combination is encountered in a water, either the concentration of chlorine or the contact time must be increased. Likewise, chlorine residual will need to be increased if sufficient contact time is not available in the distribution system before the water reaches the first user.

SUPERCHLORINATION–DECHLORINATION

Superchlorination: The technique of superchlorination involves the use of an excessive amount of chlorine to destroy quickly the harmful organisms which may be present in the water. If an excessive amount of chlorine is used, a free chlorine residual will be present. When the quantity of chlorine is increased, disinfection is faster and the amount of contact time required to insure safe water is decreased.

Dechlorination: The dechlorination process may be described as the partial or complete reduction of any chlorine present in the water. When dechlorination is provided in conjunction with proper superchlorination, the water will be both properly disinfected and acceptable to the consumer for domestic or culinary uses.

Dechlorination can be accomplished in individual water systems by the use of activated carbon (dechlorinating) filters. Chemical dechlorination by reducing agents such as sulphur dioxide or sodium thiosulfate can be used for batch dechlorination. Sodium thiosulfate is also used to dechlorinate water samples prior to submission for bacteriological examination.

DISINFECTION EQUIPMENT

Hypochlorinators are the most commonly employed equipment for the chemical elimination of bacteriological contamination. They operate by pumping or injecting a chlorine solution into the water. When properly maintained, hypochlorinators provide a reliable method for applying chlorine to disinfect water.

Types of hypochlorinators include positive displacement feeders, aspirator feeders, suction feeders and tablet hypochlorinators.

This equipment can be readily adapted to meet the needs of other systems of treatment, which require the regulated discharge of a solution into the supply.

Positive Displacement Feeders: A common type of positive displacement hypochlorinator is one which uses a piston or diaphragm pump to inject the solution. This type of equipment, which is adjustable during operation, can be designed to give reliable and accurate feed rates. When electricity is available, the stopping and starting of the hypochlorinator can be synchronized with the pumping unit. A hypochlorinator of this kind can be used with any water system. However, it is

especially desirable in systems where water pressure is low and fluctuating.

Aspirator Feeders: The aspirator feeder operates on a simple hydraulic principle that employs the use of the vacuum created when water flows either through a venturi tube or perpendicular to a nozzle. The vacuum created, draws the chlorine solution from a container into the chlorinator unit where it is mixed with water passing through the unit and the solution is then injected into the water system. In most cases, the water inlet line to the chlorinator is connected to receive water from the discharge side of the water pump, with the chlorine solution being injected back into the suction side of the same pump. The chlorinator operates only when the pump is operating. Solution flow rate is regulated by means of a control valve; pressure variations are known to cause changes in the feed rate.

Suction Feeders: One type of suction feeder consists of a single line that runs from the chlorine solution container, through the chlorinator unit and connects to the suction side of the pump. The chlorine solution is pulled from the container by suction created by the operating water pump.

Another type of suction feeder operates on the siphon principle, with the chlorine solution being introduced directly into the well. This type also consists of a single line, but the line terminates in the well below the water surface instead of the influent side of the water pump. When the pump is operating, the chlorinator is activated so that a valve is opened and the chlorine solution is passed into the well.

Tablet Chlorinator--These hypo-chlorinators inject water into a bed of concentrated calcium hypochlorite tablets. The result is metered into the pump suction line.

V. WATER RECLAIMED FROM THE CONDENSING OF MILK AND MILK PRODUCTS

Condensing water from milk evaporators and water reclaimed from milk and milk products may be reused in a milk processing plant. Acceptable uses of this water fall into three general categories:

1. Reclaimed water which may be used for all potable water purposes including the production of culinary steam.
2. Reclaimed water which may be used for limited purposes including the production of culinary steam.
3. Use of reclaimed water not meeting the requirements of this section.

Reclaimed water to be used for potable water purposes, including the production of culinary steam, shall meet the following requirements:

1. Water shall comply with the bacteriological standards of Appendix G, and, in addition, shall not exceed a total plate count of 500 per milliliter.
2. Samples shall be collected daily for two weeks following initial approval of the installation and semi-annually thereafter. *Provided,* that daily tests shall be conducted for one week following any repairs or alteration to the system.
3. The organic content shall be less than 12 mg/l as measured by the chemical oxygen demand or permanganate-consumed test; or a standard turbidity of less than 5 units.
4. Automatic fail safe monitoring devices shall be used to monitor and automatically divert (to the sewer) any water which exceeds the standard.
5. The water shall be of satisfactory organoleptic quality and shall

have no off-flavors, odors or slime formations.

6. The water shall be sampled and tested organoleptically at weekly intervals.

7. Approved chemicals, such as chlorine, with a suitable detention period, may be used to suppress the development of bacterial growth and prevent the development of tastes and odors.

8. The addition of chemicals shall be by an automatic proportioning device, prior to the water entering the storage tank, to assure satisfactory quality water in the storage tank at all times.

9. When chemicals are added, a daily testing program for such added chemicals shall be in effect and such chemicals shall not add substances that will prove deleterious to the use of the water or contribute to product contamination.

10. The storage vessel shall be properly constructed of such material that it will not contaminate the water and can be satisfactorily cleaned.

11. The distribution system, within a plant, for such reclaimed water shall be a separate system with no cross-connections to a municipal or private water system.

12. All physical, chemical and microbiological tests shall be conducted in accordance with the latest edition of *Standard Methods for the Examination of Water and Wastewater*.

Reclaimed water may be used for limited purposes including:

1. Production of culinary steam.

2. Pre-rinsing of the product surfaces where pre-rinses will not be used in food products.

3. Cleaning solution make-up water. Provided that for these uses items #3-11 of this section are satisfied and:

a. There is no carry-over of water from one day to the next, and any water collected is used promptly; or

The temperature of all water in the storage and distribution system is maintained at 63°C (145°F) or higher by automatic means; or

The water is treated with a suitable, approved chemical to suppress bacterial propagation by means of an automatic proportioning device, prior to the water entering the storage tank; and that,

b. Distribution lines and hose stations are clearly identified as "limited use reclaimed water"; and

c. Water handling practices and guidelines are clearly described and prominently displayed at appropriate locations within the plant; and

d. These water lines are not permanently connected to product vessels, without a break to the atmosphere and sufficient automatic controls, to prevent the inadvertent addition of this water to product streams.

Recovered water not meeting the requirements of this section may be used as boiler feedwater for boilers, not used for generating culinary steam, or in a thick, double walled, enclosed heat exchanger.

VI. WATER RECLAIMED FROM HEAT EXCHANGER PROCESSES

Potable water utilized for heat exchange purposes in plate or other type heat exchangers or compressors on Grade “A” dairy farms may be salvaged for the milking operation if the following criteria are met:

1. The water shall be stored in a storage vessel properly constructed of such material that it will not contaminate the water and be designed to protect the water supply from possible contamination.

2. The storage vessel shall be equipped with a drain and access point to allow for cleaning.

3. No cross-connection shall exist between this supply and any unsafe or questionable water supply or any other source of pollution.

4. There are no submerged inlets through which this supply may be contaminated.

5. The water shall be of satisfactory organoleptic quality and shall have no off flavors or odors.

6. The water shall comply with the bacteriological standards of Appendix G.

7. Samples shall be collected and analyzed prior to initial approval and semi-annually thereafter.

8. Approved chemicals, such as chlorine, with a suitable retention period, may be used to suppress the development of bacterial growth and prevent the development of tastes and odors.

9. When chemicals are added, a monitoring program for such added chemicals shall be in effect and such chemicals shall not add substances that will prove deleterious to the use of the water or contribute to product contamination.

10. If the water is to be used for the sanitizing of teats or equipment (backflush systems), approved sanitizers, such as iodine may be added by an automatic proportioning device located downstream from the storage vessel but prior to its end-use application.

NOTE:--The following figures 8-23 are taken from *The Manual of Individual Water Supply Systems,* Environmental Protection Agency publication number EPA-430-9-73-003.

VII. DRAWINGS OF CONSTRUCTION DETAILS FOR WATER SOURCES

Following are drawings showing the details of several types of water sources:

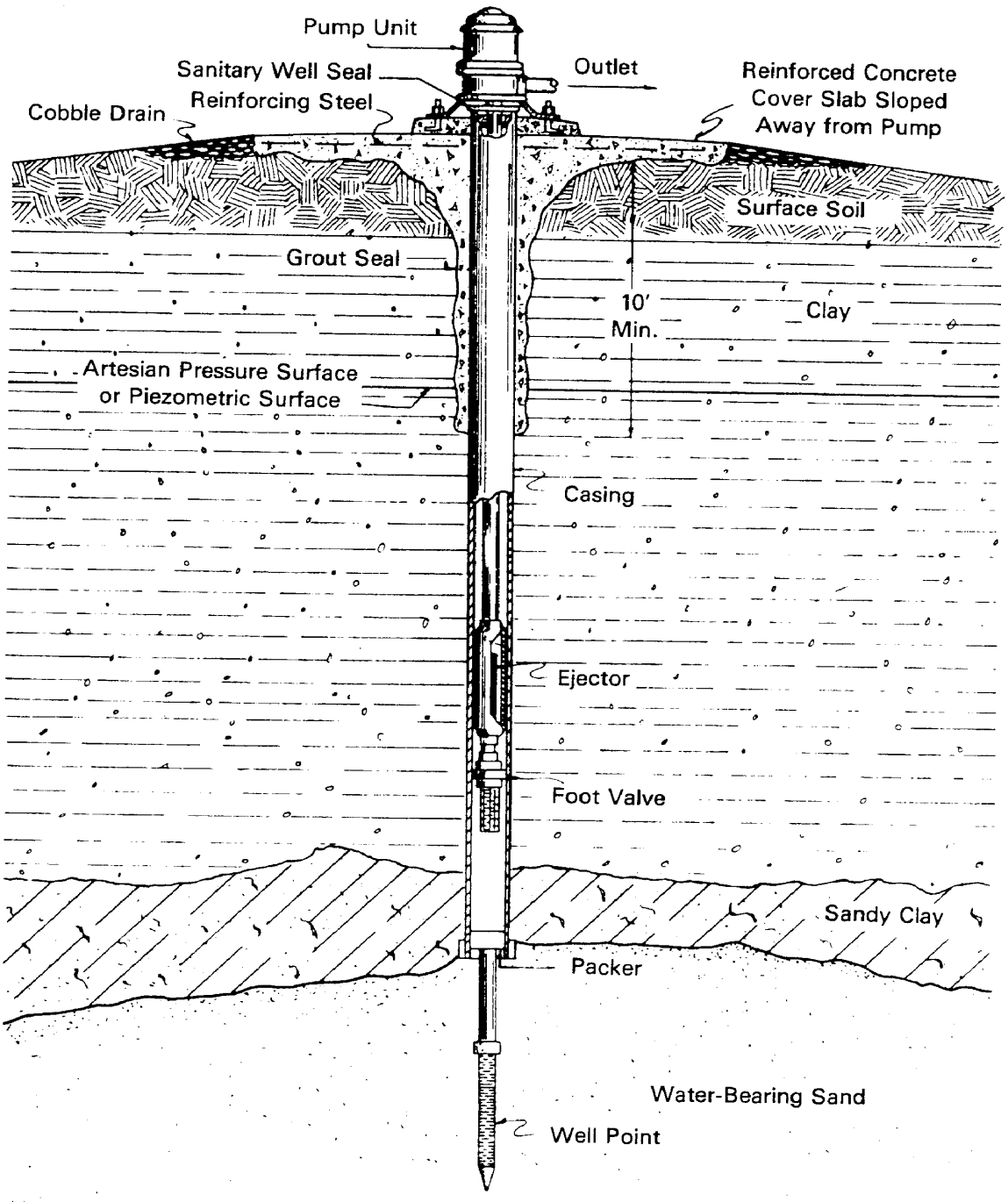


Figure 8. Bored Well with Driven Well Point

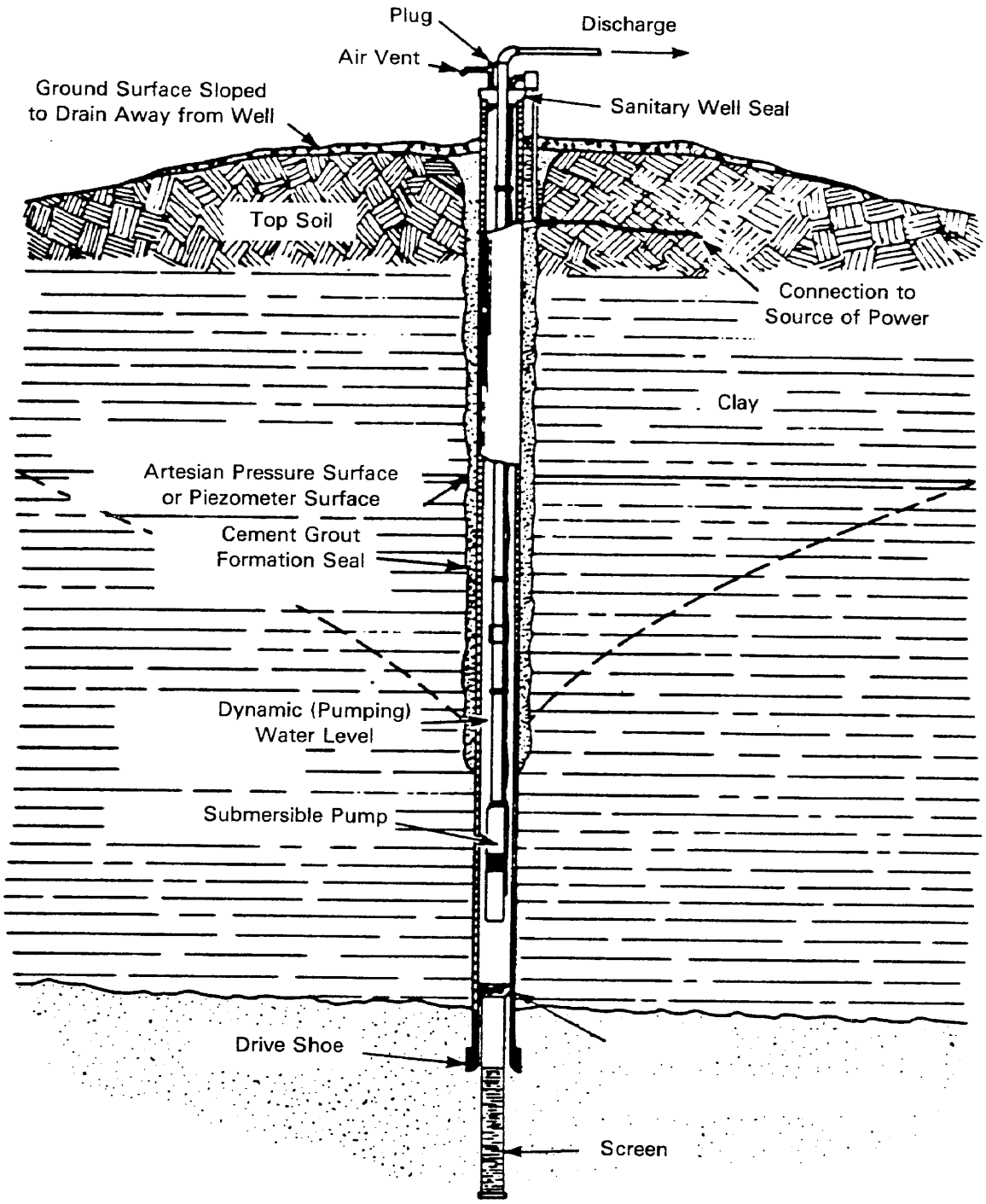


Figure 9. Drilled Well with Submersible Pump

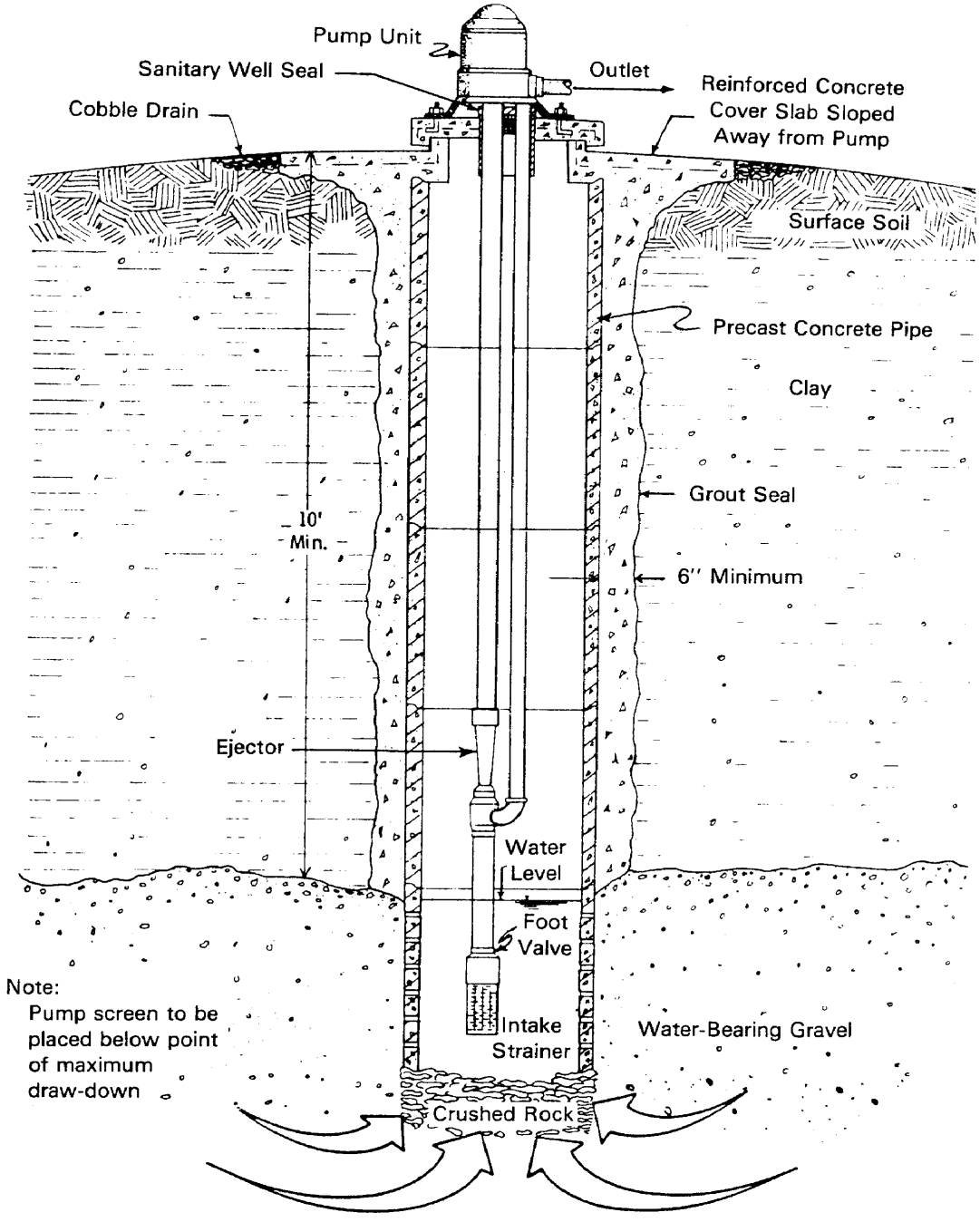


Figure 10. Dug Well with Two-Pipe Jet Pump Installation

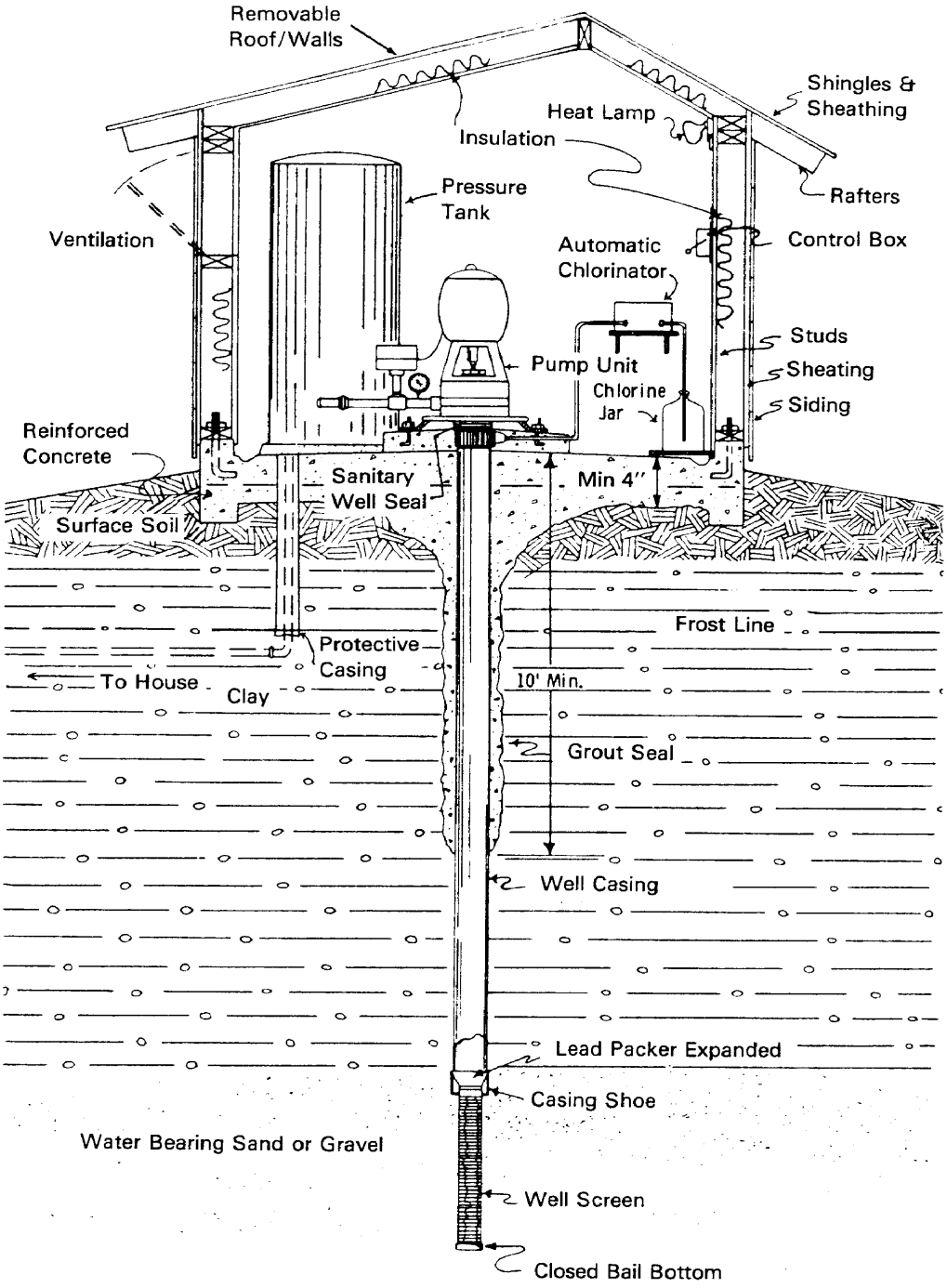


Figure 11. Pumphouse

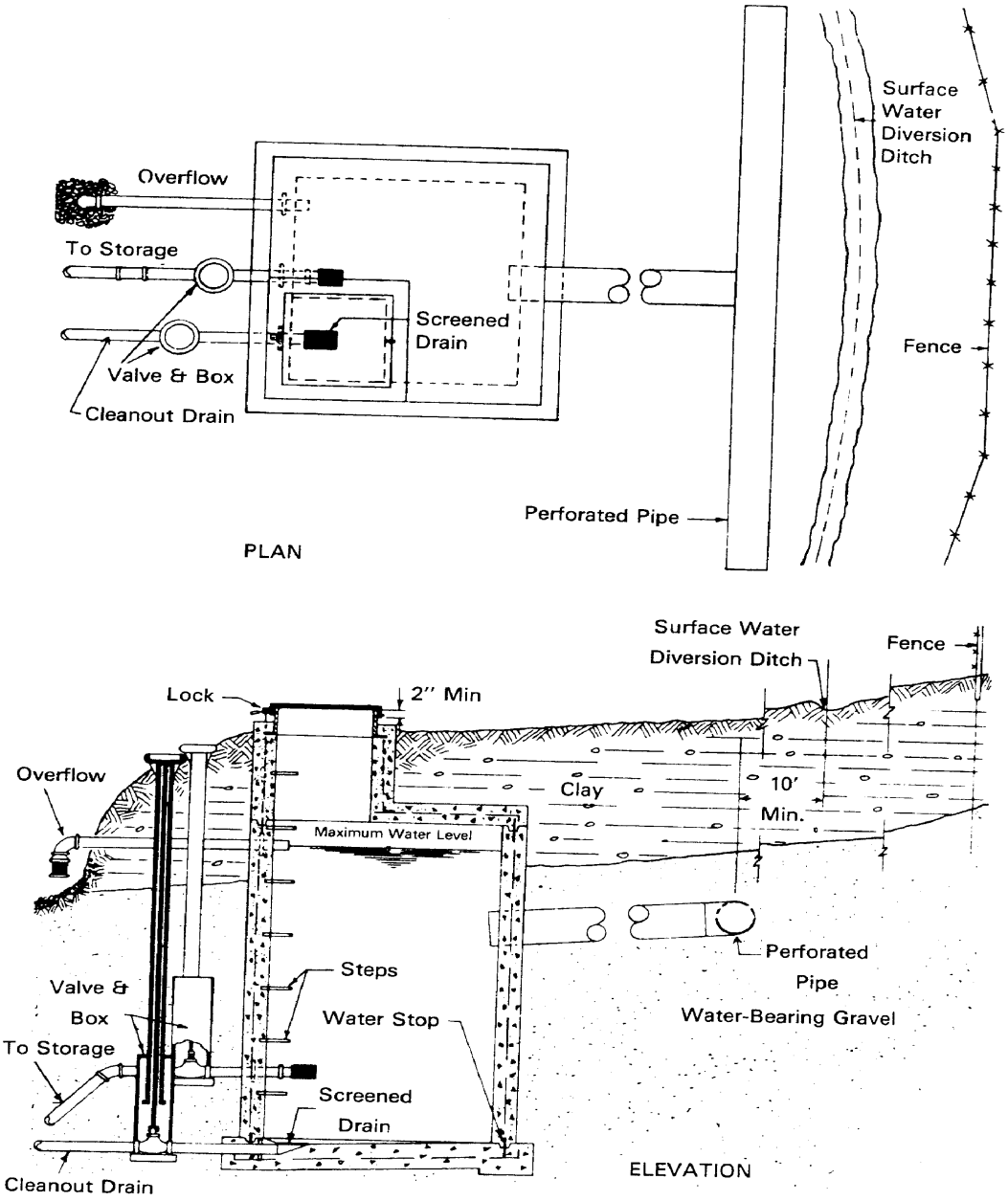


Figure 12. Spring Protection

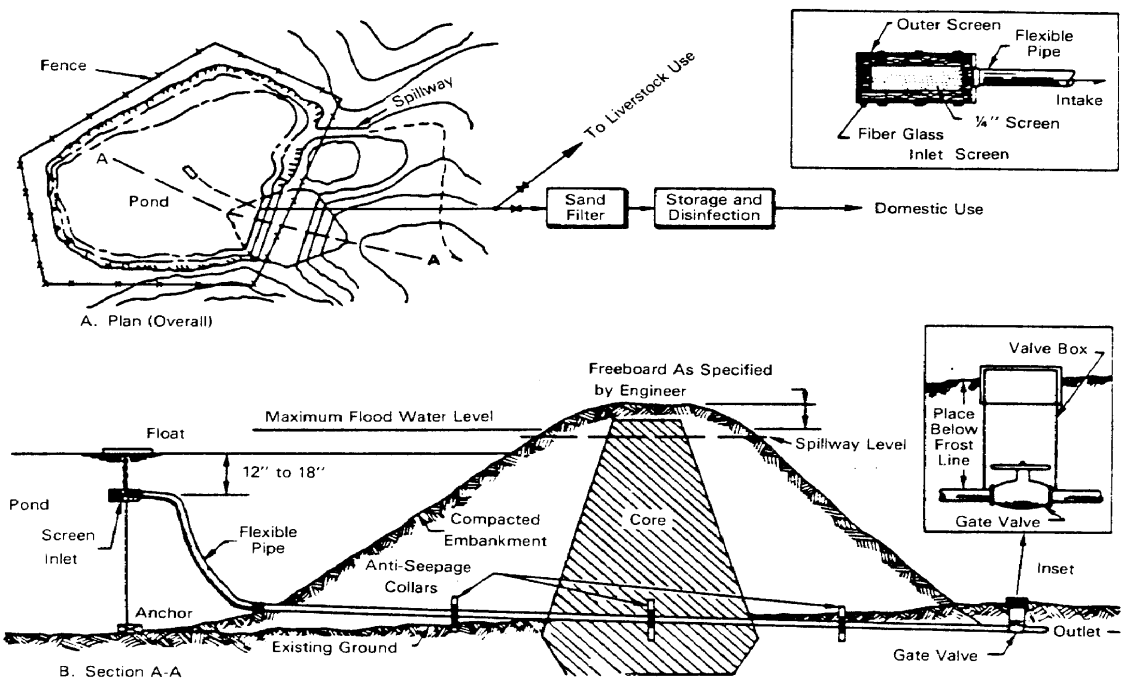


Figure 13. Pond

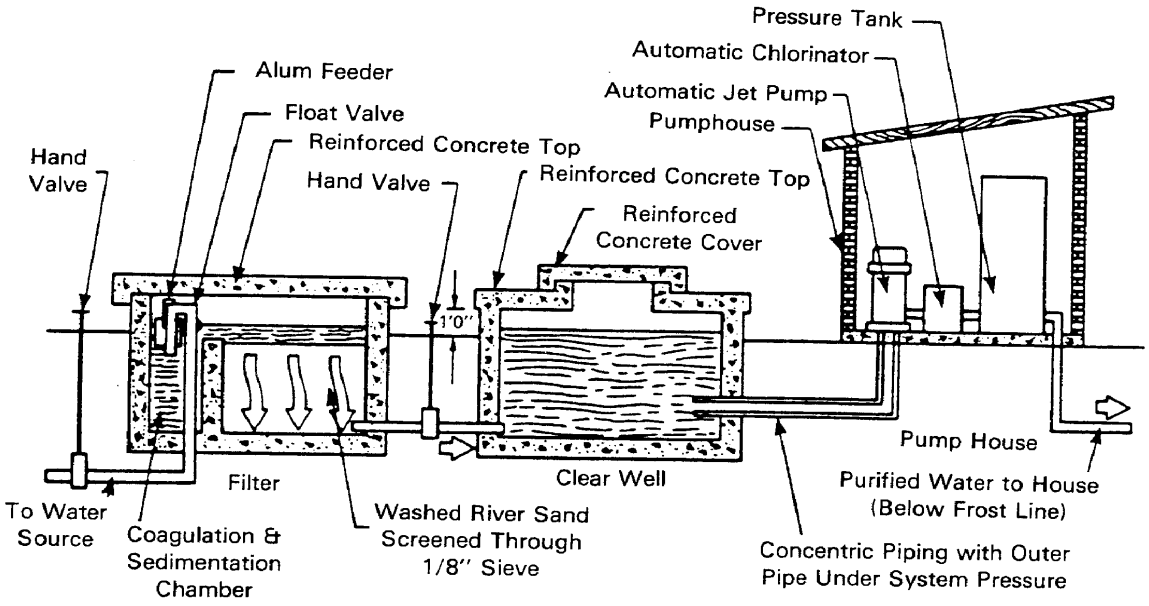


Figure 14. Schematic Diagram of a Pond Water-Treatment System

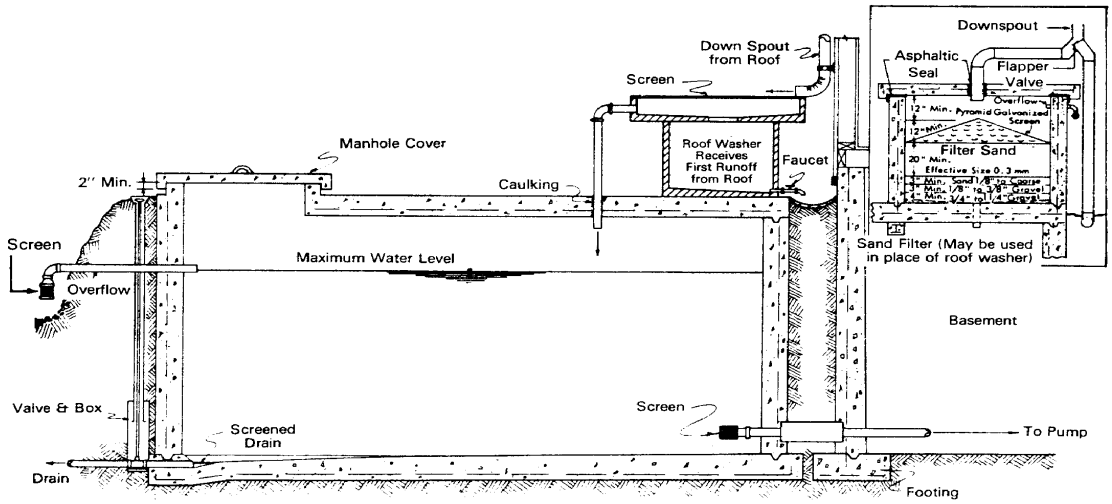


Figure 15. Cistern

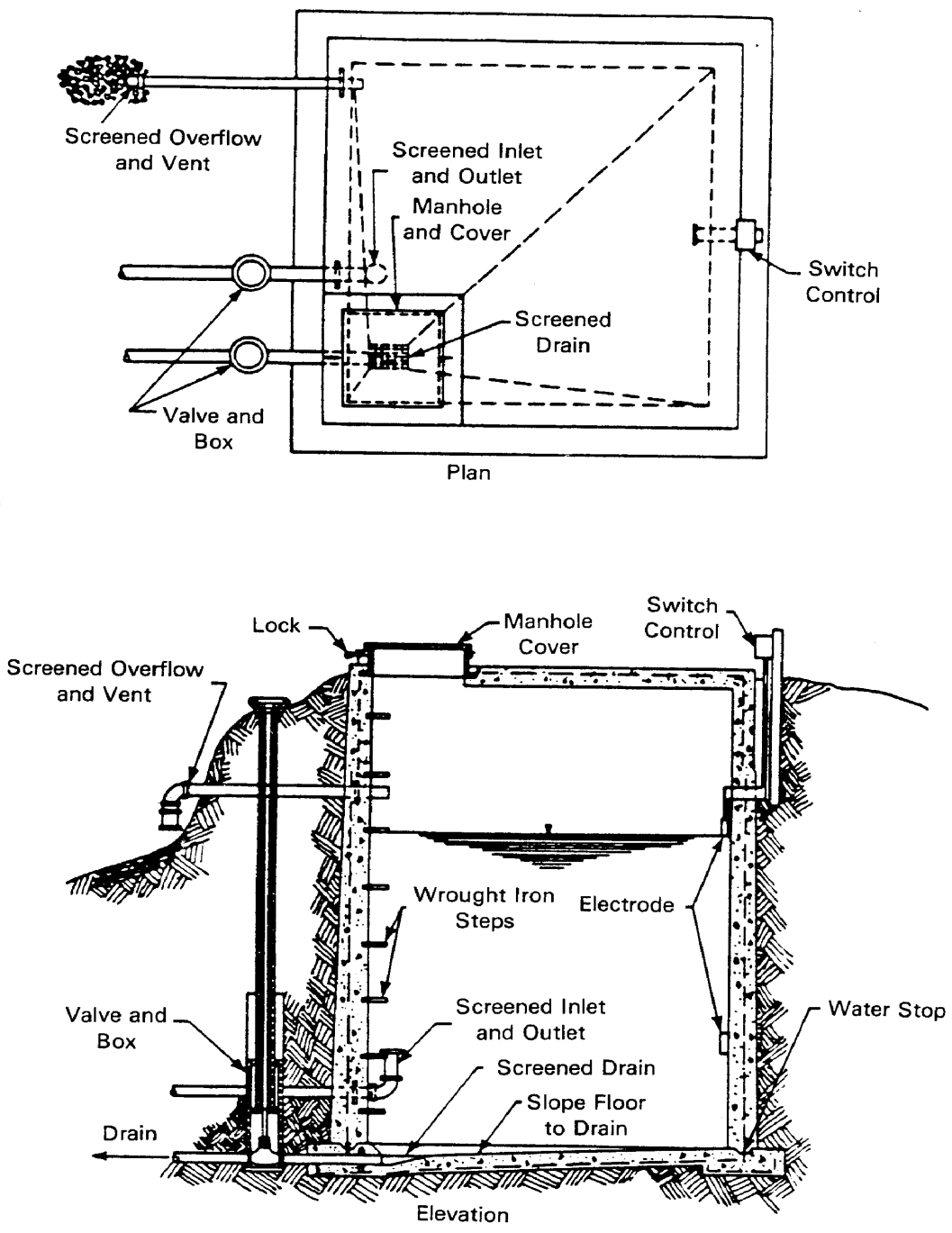


Figure 16. Typical Concrete Reservoir

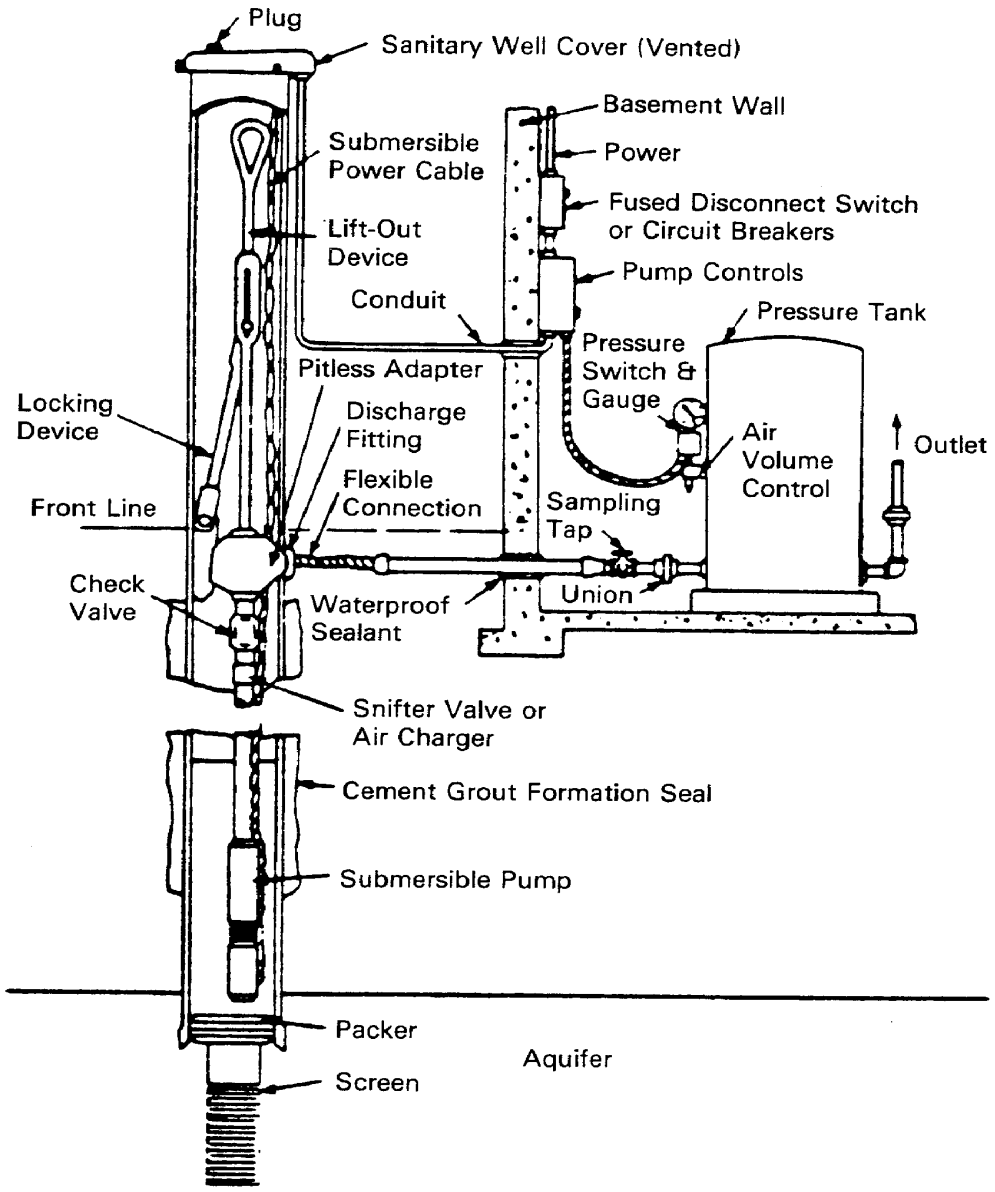


Figure 17. Pitless Adapter with Submersible Pump Installation for Basement Storage

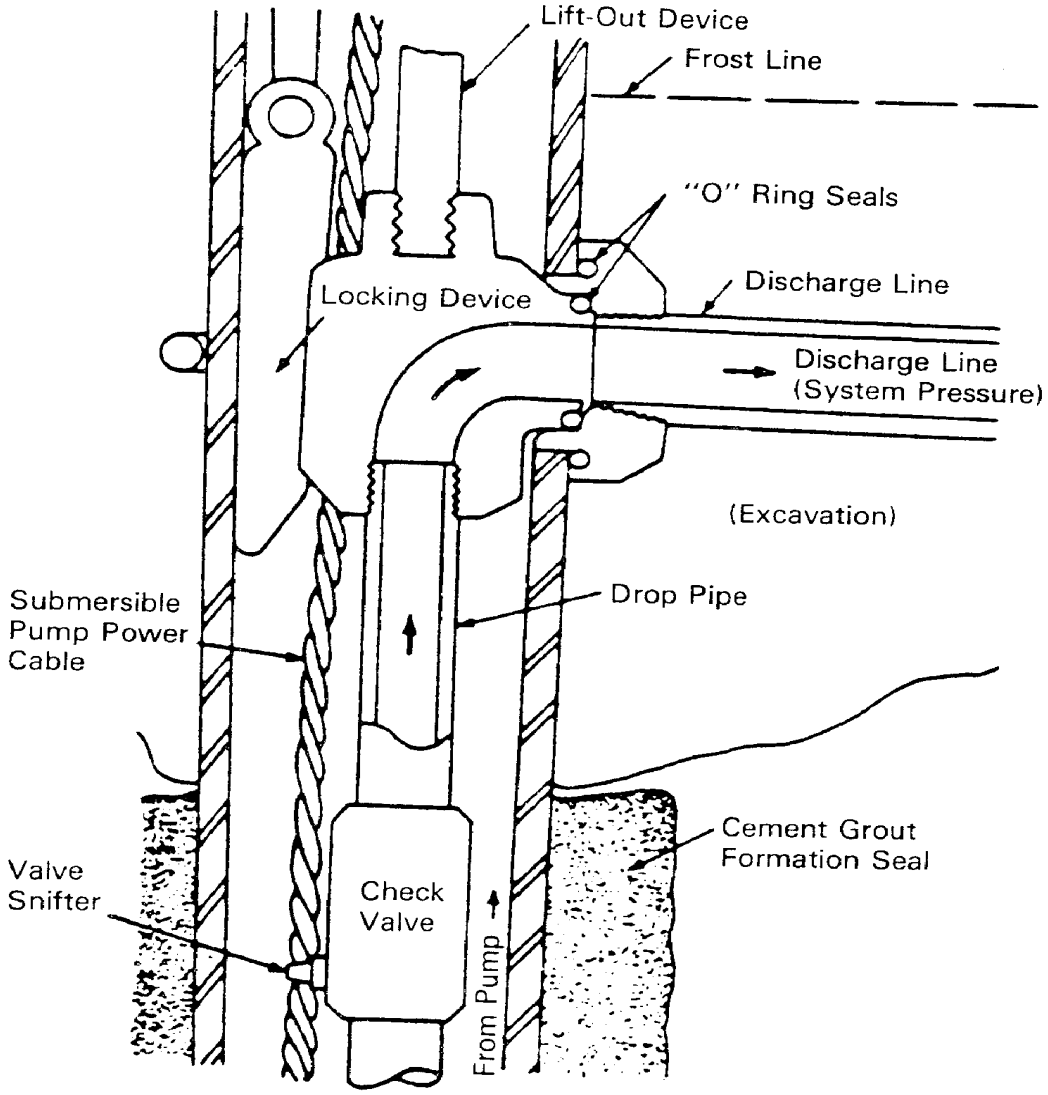


Figure 18. Clamp-on Pitless Adapter with Concentric External Piping for "Shallow Well" Pump Installation

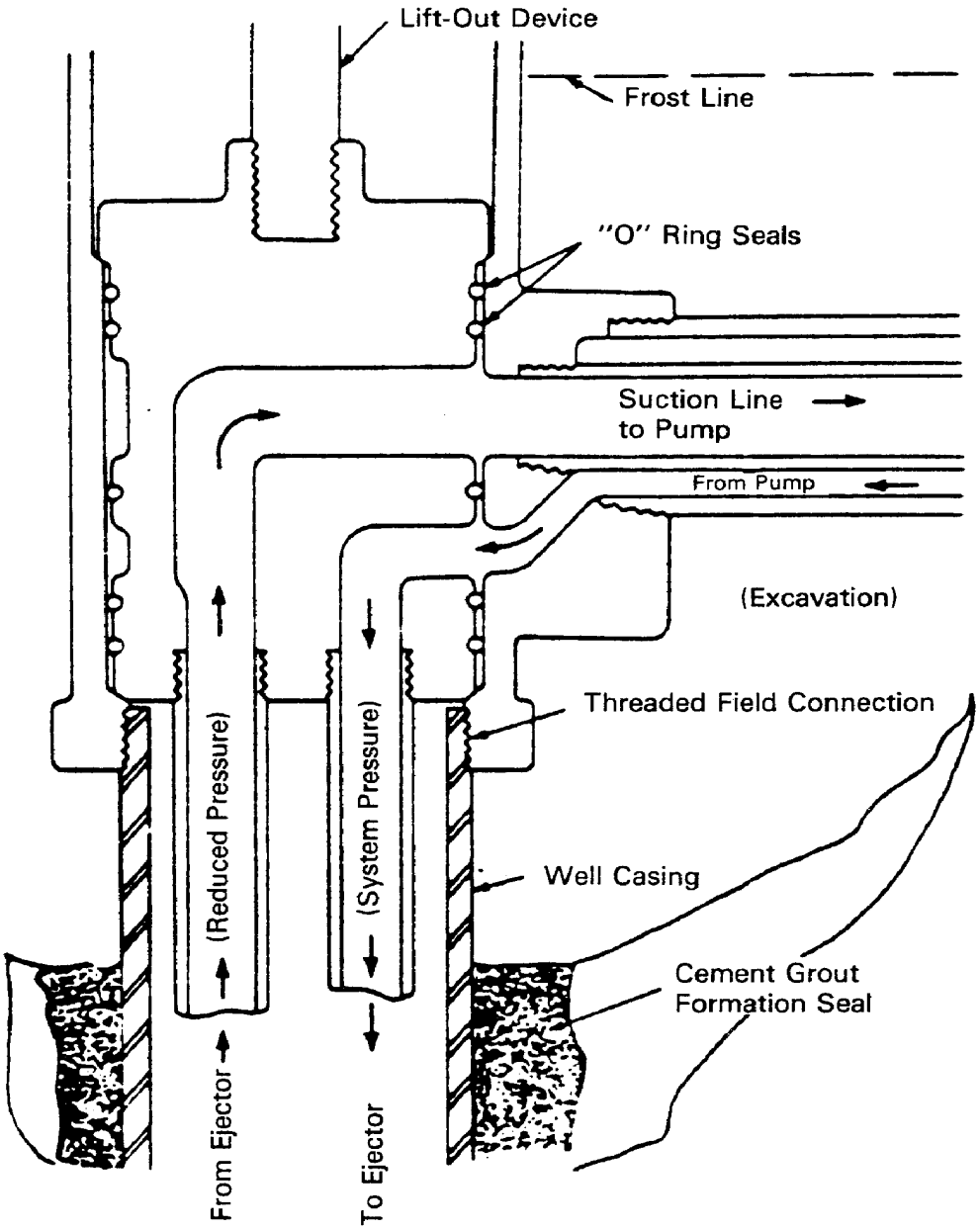


Figure 19. Pitless Unit with Concentric External Piping for Jet Pump Installation

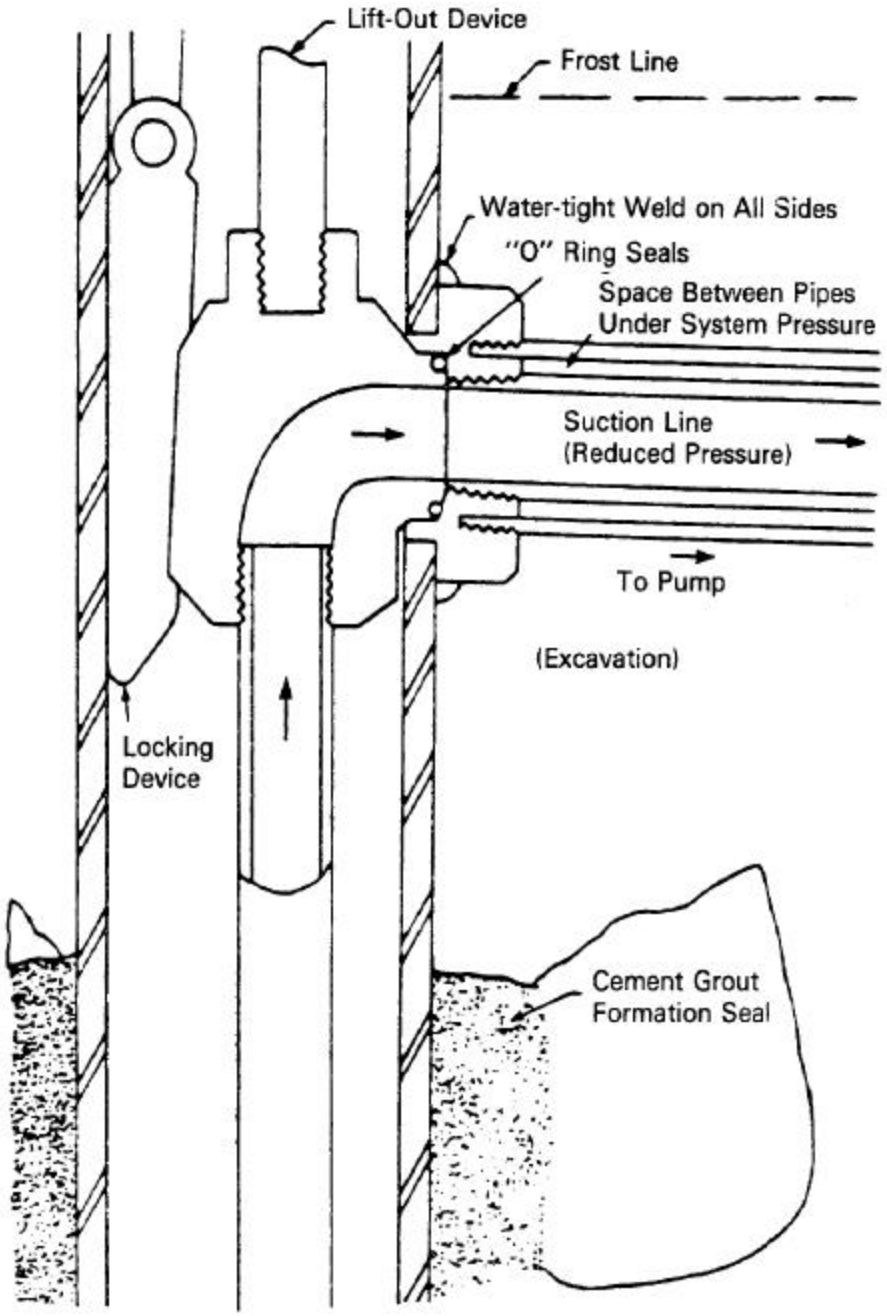


Figure 20. Weld-on Pitless Adapter with Concentric External Piping for "Shallow Well" Pump Installation

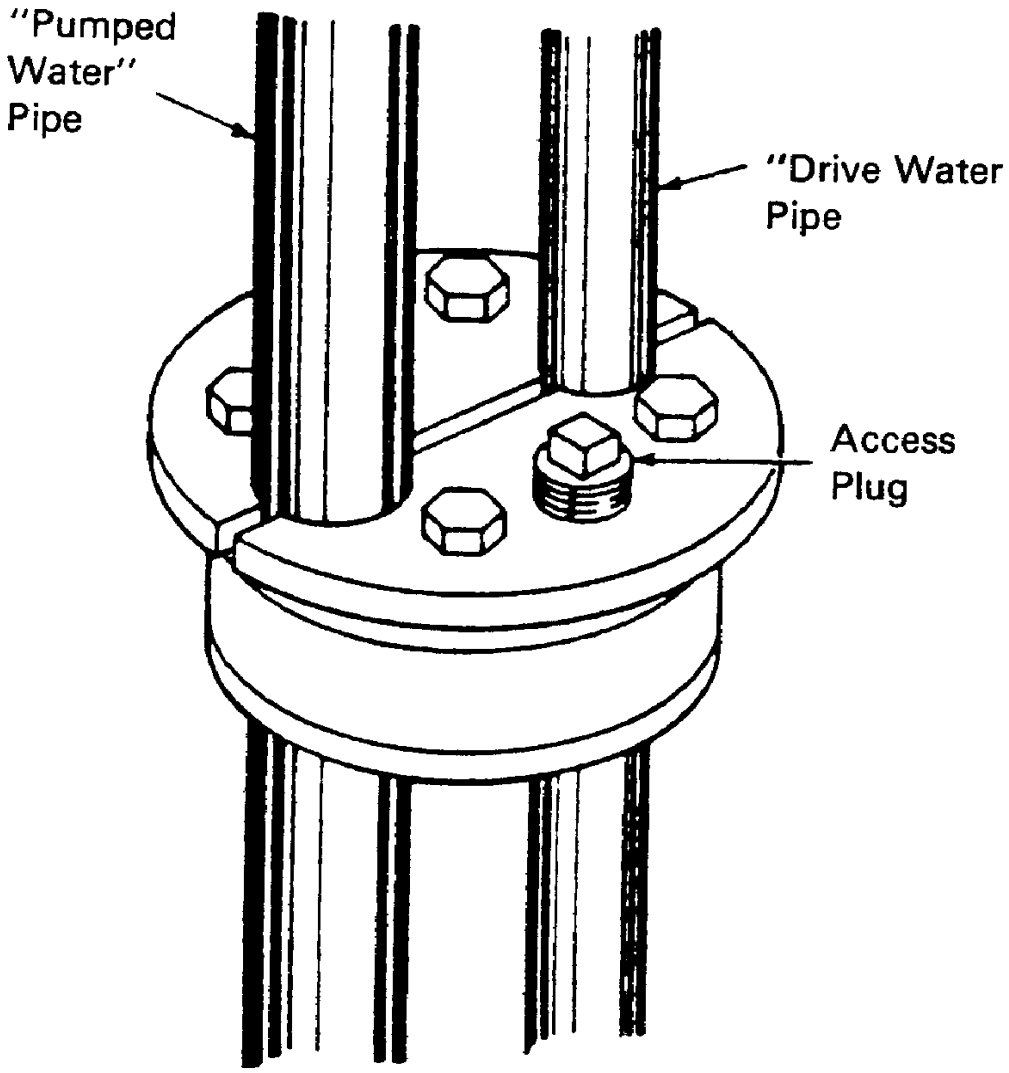


Figure 21. Well Seal for Jet Pump Installation

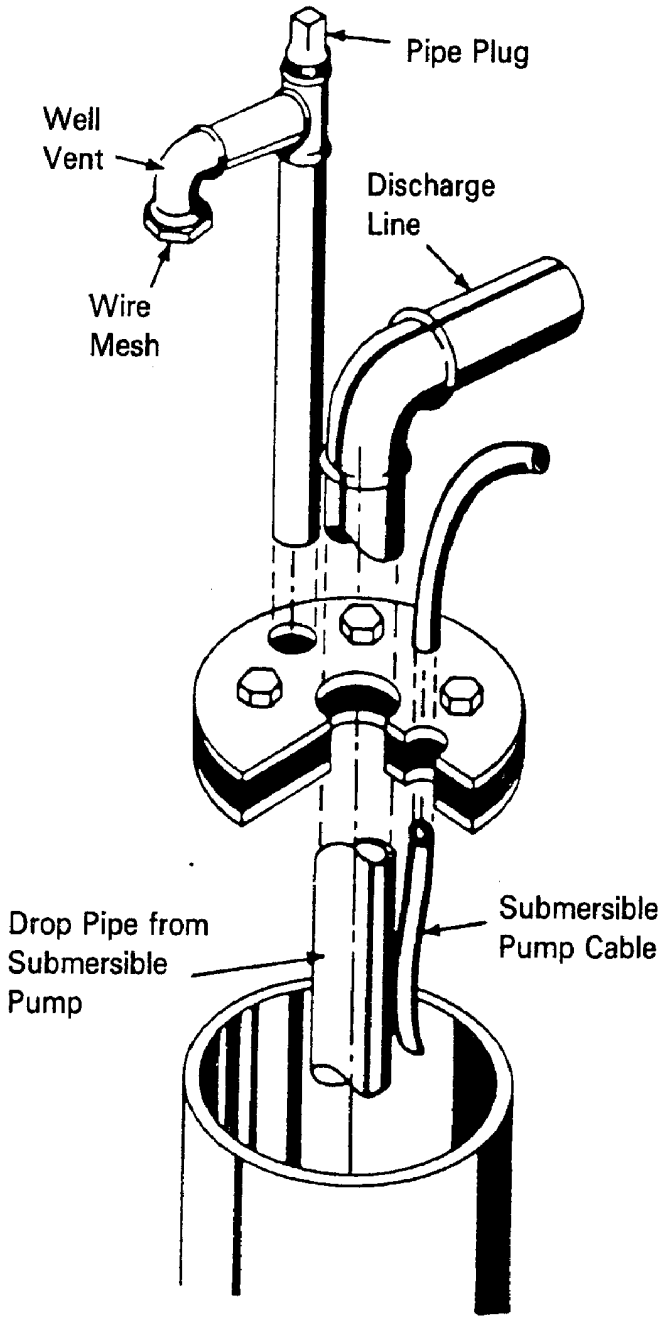


Figure 22. Well Seal for Submersible Pump Installation

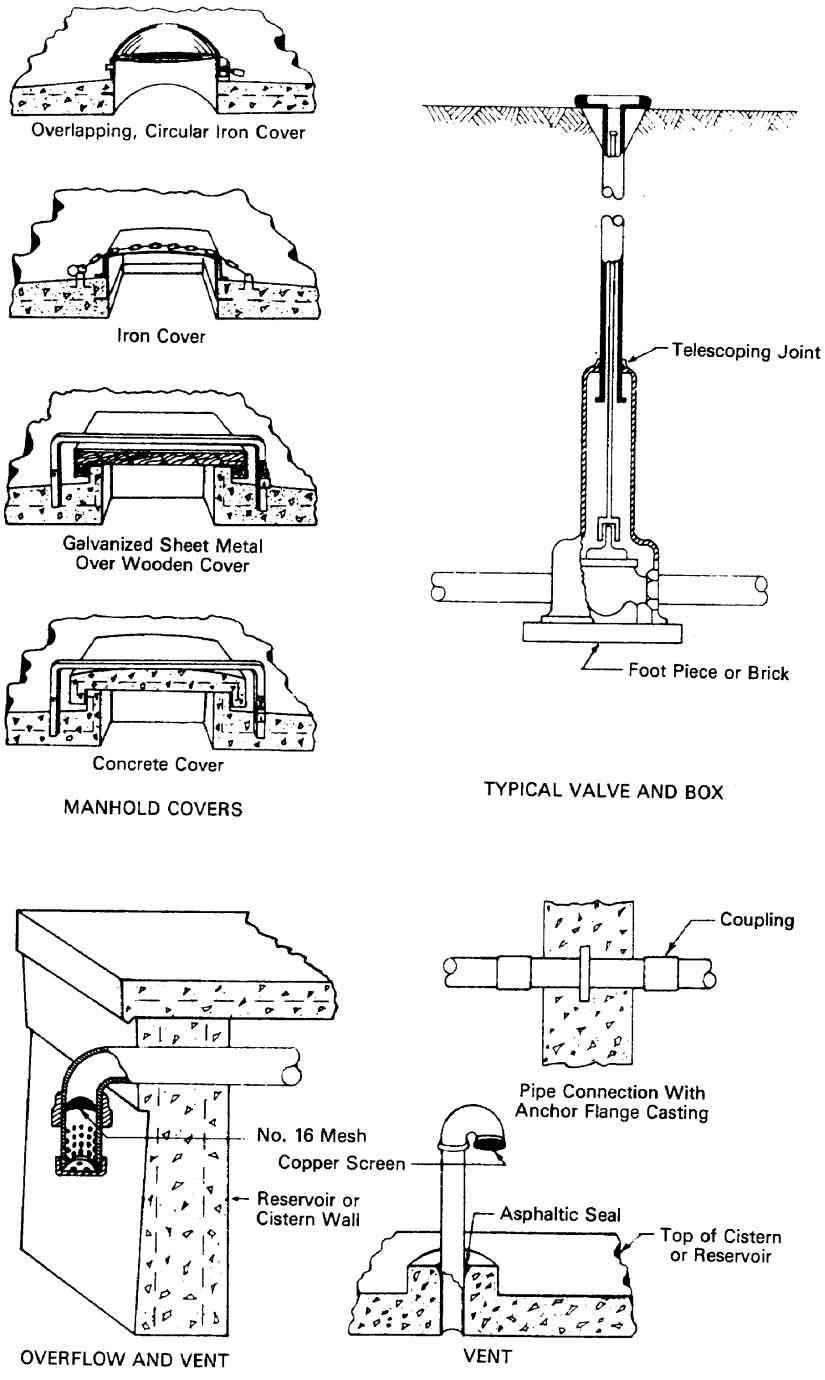


Figure 23. Typical Valve and Box, Manhole Covers, and Piping Installation

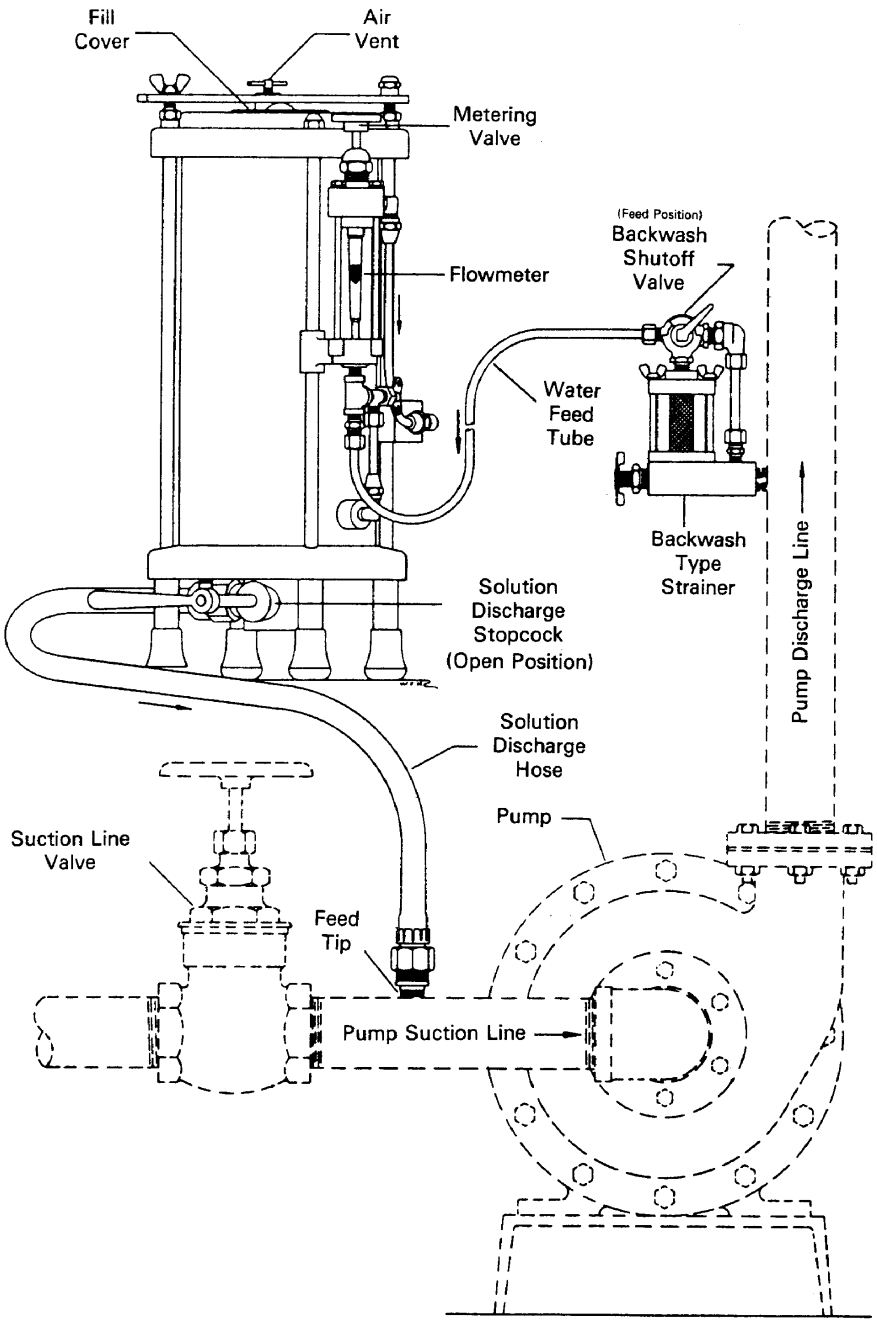


Figure 24. Suction Feeder

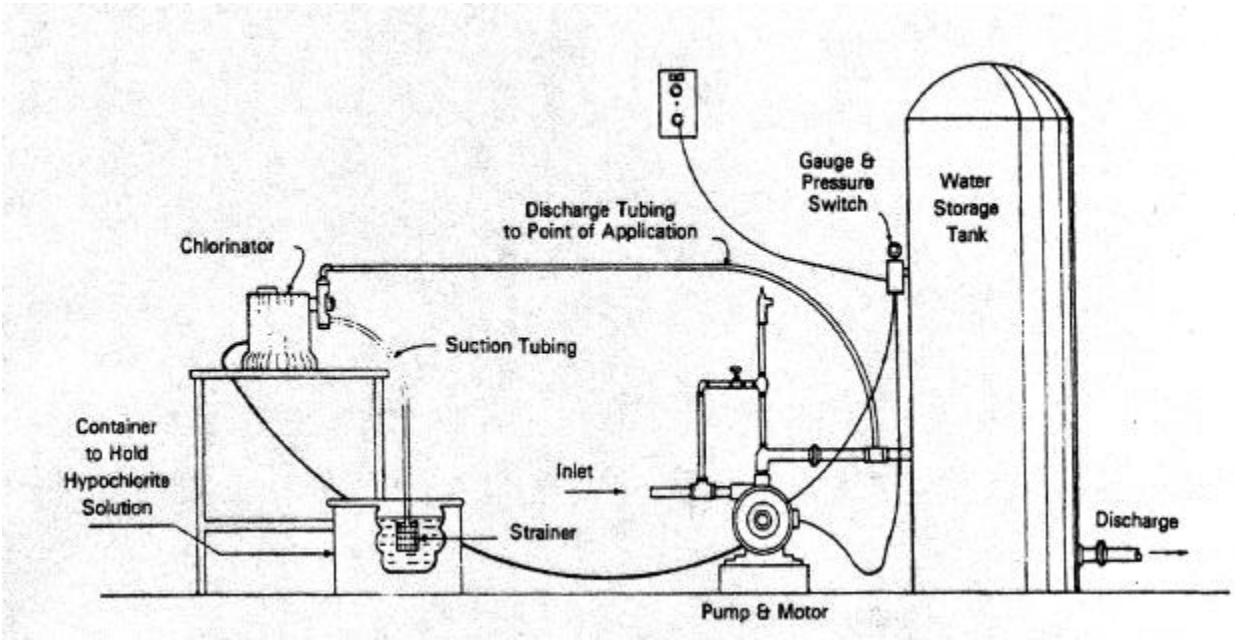


Figure 25. Positive Displacement Chlorinator

APPLICATION TO INSTALL A BULK MILK TANK

Washington State Department of Agriculture
Food Safety & Animal Health Division
Dairy Program
PO Box 42560
Olympia WA 98504-2560
(360) 902-1875

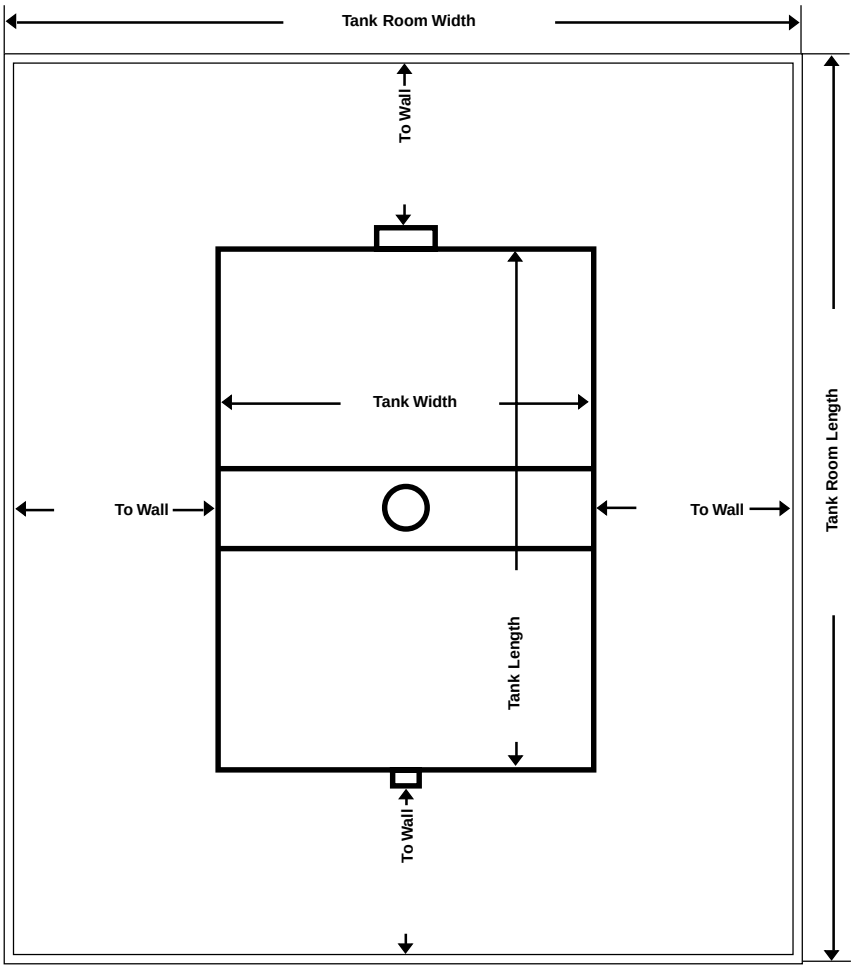
PRODUCER INFORMATION

MILK PRODUCER NAME	TELEPHONE NUMBER ( )	E-MAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP

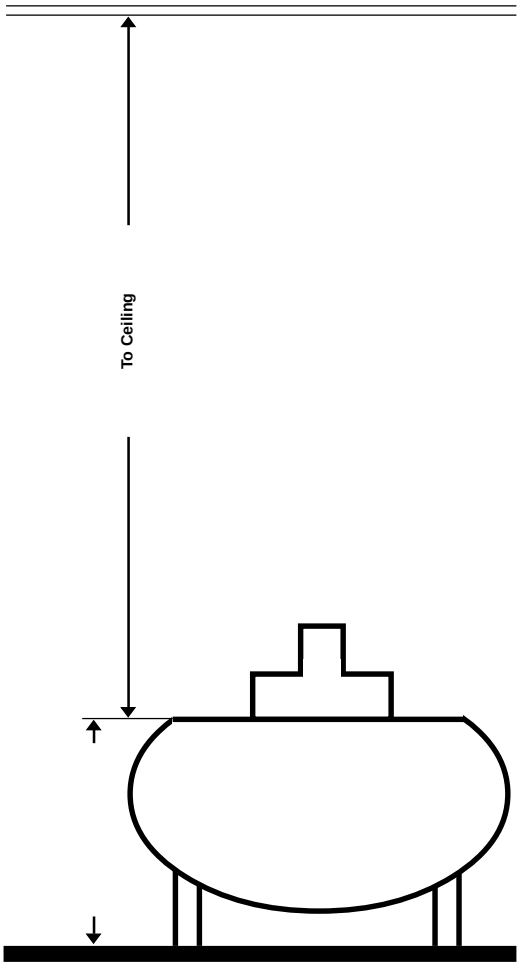
TANK INFORMATION

NAME OF FIRM TANK PURCHASED FROM			INSTALLER NAME Telephone #		
PURCHASED FROM ADDRESS			INSTALLER ADDRESS		
PURCHASED FROM CITY	STATE	ZIP	INSTALLER CITY	STATE	ZIP
MAKE OF TANK			NEW OR USED? ❑ NEW ❑ USED	CAPACITY GALLONS	

Using spaces provided in the drawings below, show all distances in inches and indicate location of floor drain(s), hoseport, wash vats, milk house door, driveway, milking parlor door, overhead lighting & vents.



(Top View)



(Elevation)

SUBMITTER INFORMATION

SUBMITTED BY	
TITLE OF SUBMITTER	DATE SUBMITTED

APPROVAL (WSDA USE ONLY)

APPROVAL SIGNATURE	
NAME OF APPROVER (PLEASE PRINT)	
TITLE OF APPROVER	DATE APPROVED

STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
FOOD SAFETY & ANIMAL HEALTH DIVISION
OLYMPIA, WASHINGTON

REGULATIONS GOVERNING THE CONSTRUCTION AND INSTALLATION OF FARM BULK MILK TANKS

1. All farm bulk milk holding tanks must meet the equivalent of 3A standards of design and construction.

2. All bulk milk tanks shall meet the National Institute of Standards and Technology (NIST) Handbook 44 requirements and be equipped with an accurate measuring device.

3. All bulk milk tanks shall be so equipped that the correct calibration level can be readily determined.

4. All farm-holding tanks shall be so installed that no change in position will occur by ordinary condition of usage.

5. Plans showing the floor area, height of ceiling and dimensions and location of farm tank to be installed are to be submitted to the department for approval before installation or construction is started.

6. A minimum of two feet clearance shall be provided between the sides of the tank and the walls of the milkhouse or other permanent equipment and a minimum of three feet on the working side of tank and at outlet valve and adequate additional space necessary for normal milkhouse operations is to be provided.

7. Farm tank outlet valves shall not be located directly over floor drains.

8. Plug type outlet valves shall not be used for bottom filling of bulk milk tank

9. Door of the milkhouse is not to be used for entrance of hose from the tank truck. There shall be provided a hose port in the wall of the milkhouse at least four inches above the floor and/or ground level for the hose entrance. The opening is to be provided with a self-closing door to prevent the entrance of insects and rodents.

10. The agitator switch is to be conveniently located in the milkhouse. Automatic agitators are to be provided with a manual control.

11. Agitator shafts need to be enclosed on installations with agitator shafts located outside the milkhouse when the farm bulk tank is headed outside the milk house wall.

12. Farm bulk tank installations shall include a recording thermometer and an automatic interval timer. The recording thermometer shall meet the specifications in WAC 16.125-200 & WAC 16.125-210.

REGULATIONS GOVERNING THE CONSTRUCTION AND INSTALLATION OF FARM BULK MILK TANKS

13. The farm tank shall be equipped with an accurate integral-indicating thermometer.

14. Milk shall not be held in a farm tank longer than 48 hours.

15. Milk in farm holding tanks must be cooled to 40º Fahrenheit or lower. The cooling process must be such that the milk will be cooled to 50º Fahrenheit within one hour after milking and to 40º Fahrenheit within the second hour. The addition of later milkings must not raise the temperature above 50º Fahrenheit.

RECOMMENDATIONS
on the
INSTALLATION, OPERATION & CLEANING
of
PIPELINE MILKERS

The Department of Agriculture, Food Safety Division must approve plans for pipeline installations and alterations prior to installation.

1. MILKLINE AND FITTINGS

All installations must comply with State of Washington standards. Equipment, pipe and fittings should meet 3-A standards or equivalent.

In some cases flexible fittings and hoses are allowable for transferring milk from farm tank to milk tanker and bottom filling farm bulk tanks otherwise, rigid construction of piping is required.

All sanitary piping, fittings and connections, which are exposed to milk or milk products, consist of smooth, impervious, corrosion resistant, nontoxic, easily cleanable material.

2. INSTALLATION OF MILK LINE, WASH LINE, AND VALVES

All interior surfaces of welded joints shall be smooth and free of pits, cracks and inclusions.

Each cleaning circuit shall have access points for inspection in addition to the entrances and exits. These may be valves, removable sections, fittings or other means of combinations that are adequate for inspection of the interior of the line. These access points shall be located at suf-ficient-intervals to determine the general condition of the interior surface of the line.

Detailed plans for milk, cleaned-in-place and welded pipeline systems shall be submitted to in to the department for written approval prior installation. No alteration or addition shall be made to any milk pipelines system without prior written approval from the department.

Milk hoses shall be so located in the washing cycle to be self-draining during storage.

The milkline must slope to carry the milk away and arranged so that it can be completely drained. All cleaned-in-place milk lines, return–solution lines must be self-draining.

3. CLEANED 1N PLACE EQUIPMENT

All pipeline installations should be cleaned with an approved cleaned-in-place system. A "Cleaned-in-Place" system, which is usually called C.I.P. has equipment provided to thoroughly wash (and sanitize) the milk pipeline, milking unit, inflation’s, milk hoses, releaser and other parts having contact with the milk.

An accurate indicating thermometer, easily readable, shall be installed in the return solution line.

4. SIZE OF MILKLINE

Adequate cleaning facilities and procedures must be provided for the proper cleaning of pipelines, designed to size, lengths and flows.

5. SEPARATION OF WASHING SYSTEM

C.I.P. circuit must be separated by physical break from milking system during milking.

6. SOLUTION TANK

The open C.I.P. wash vat for use in washing the pipeline must-be located in the milkhouse and he made of stainless steel. This tank is not to be used for hand washing of equipment.

7. CAPPING PIPELINE OPENINGS

All pipeline openings for milk in the milkhouse or parlor must be capped when not in use.

8. CAPACITY OF WASHING SYSTEM

The washing system (vacuum or pump) shall have enough capacity to adequately wash, rinse and sanitize the milking system.

9. CLEANING OUTSIDE OF LINES AND EQUIPMENT

All milking equipment (lines, milking units, etc) must be clean on the outside surfaces prior to C.I.P. washing.

10. LOCATION OF OTHER ACCESSORY EQUIPMENT

The vacuum pump, motors or other equipment that may emit oil, fumes; grease or odors shall not be located in the milkhouse.

11. GASKETS

All fittings on the milk and washing system must be of the type that utilizes recessed gaskets. All gaskets used in the entire milkline system must be a type that will not interfere with the milk flow, washing or sanitizing.

12. REQUIREMENTS FOR WASHING SYSTEM

All C.I.P. lines, fittings and equipment must meet all product contact surface quality standards.

A sufficient hot water supply needs to be provided to meet all cleaning requirements.

A. Cleaning Recommendations

The equipment supplier should provide exact directions and recommend proper washing and sanitizing materials for his equipment.

B. Sanitization of Equipment

All cleaned product-contact surfaces used in the handling, storage or transportation of milk must be sanitized prior to each use.