MA# 152988
AWMP #05074

Animal Waste Management Plan

June 2005

JD Milkyway Dairy

Operated by:

Jeff Delong
4754 North Road G
Vale, Oregon 97918
(541) 473-2420

Facility Address:

9th Avenue East
Vale, Oregon

Operation:

Dairy
Small State CAFO

As owner and operator of JD Milkway Dairy, I intend to manage in accordance with the practices and operation and maintenance described in this Animal Waste Management Plan.

Signature Jeff Delong Date 6-10-05

GENERAL NARRATIVE DESCRIPTION

JD Milkyway Dairy is located in Vale, Oregon and is owned and operated by Jeff Delong. The operation is a Grade A Dairy. The dairy is in operation year round and animal numbers may reach a maximum of 300 total head. The breed of cattle used in this operation is Holstein. The facility has capacity of 150 stalls to accommodate the cows that are milked daily. These cows weigh approximately 1300 pounds. Forty heifers are maintained on an annual basis to replenish any cull cows. These heifers weigh on the average 750 pounds. Thirty calves that weigh approximately 250 pounds and 30 calves that weigh approximately 450 pounds are raised at the facility. Also, at times as many as 35 baby calves are kept and confined in straw stalls.

Manure Collection Methods

All cattle, except the baby calves are confined in earthen pens. The manure is collected in the pens where it is dehydrated and used as bedding for the cattle. Excess manure that is not mounded for bedding will be utilized as a soil amendment.

An evaporation pond and holding area are maintained at the back of the facility to catch contaminated runoff and drainage of the parlor water. Runoff from the concrete slab, which totals approximately 15,000 square feet, also drains to the evaporation pond. All liquid in the pond mostly evaporates by fall. Earthen berms and grass filter strips are maintained around the feedlot pens to reduce the potential for runoff during a storm.

Manure Storage Facilities and Transfer

The manure generated at the facility is handled in a dry solid form. Dry manure is scraped and stacked within feedlots during the confinement period, and then land applied during the late fall season after proper dehydration. Some manure is applied in the late spring prior to corn planting. All manure will be contained within the facilities. Clean water is diverted around the system, except in extreme conditions, when some rainfall or snowfall enters the feedlots.

The evaporation pond and holding area available to catch the parlor water and contaminated runoff will mostly evaporate due to the dry climate (9.97" average annual rainfall, 40.23" average annual evaporation). Solids that are collected in the pond are cleaned out every five years, or as needed. The solids are applied to crop ground.

The solid manure is stored within the dry lots. It is transported to the fields and spread with a manure spreader during the late fall season or late spring.

Corn silage is stored in a pit that has concrete flooring and dirt sidewalls. All leachate and contaminated runoff is contained and evaporated.

Manure Utilization

The land available for manure application is owned by Jeff Delong. There are 160 acres of ground adjacent to the dairy operation, and of those, 138 acres are farmed. Currently, 32 acres of alfalfa which yields 7 tons per acre, 46 acres of corn silage which yields 28 tons per acre, 34 acres of corn

grain which yields 180 bushels per acre, and the 26 acres of wheat which yields 130 bushels per acre. The crops are used as feed in a high energy ration for the cattle. Some additional tonage of hay and grains may be purchased, depending on the circumstances of the current year.

Manure is transported and applied to the fields via a manure spreader. Dry manure will be spread in a wheat-corn silage-corn rotation. No manure is applied to the alfalfa at this time. Currently, no manure is exported off of the farm.

SPECIFIC DESCRIPTIONS AND CALCULATIONS

Land Application Areas

Aerial photos showing numbered field locations for all manure application acreage and surface water features, a topography map and a schematic of the feedlot headquarters are included in this Animal Waste Management Plan.

There are 7 soil types found on the property including, 11A, 11B, 11D, and 11E Frohman silt loam, 27 Powder silt loam, 31 Stanfield silt loam, and 34 Umapine silt loam. A soil map and soil map unit description for all potential manure application areas is included in this Animal Waste Management Plan.

Manure and Waste Volumes

Calculated volumes of all manure, bedding, wash water, silage leachate, and contaminated storm water have been completed using the USDA/NRCS Animal Waste Management Worksheet, Version 1.8. The worksheet is included in this Animal Waste Management Plan. Actual manure test results will be used to "field test" the estimated values.

Nutrient Content of Manure, Litter and Process Waste Water

The USDA/NRCS Animal Waste Management Worksheet, Version 2.0 is used to estimate content and volume of nutrients in manure, litter, and process wastewater.

Farm Nutrient Balance

The Animal Waste Management Worksheet also includes calculated data for nutrient balance for the operation. JD Milkyway Dairy is balancing for nitrogen which is the most limiting nutrient as determined by the NRCS Phosphorus Index, which indicated a Site Vulnerability Class of LOW.

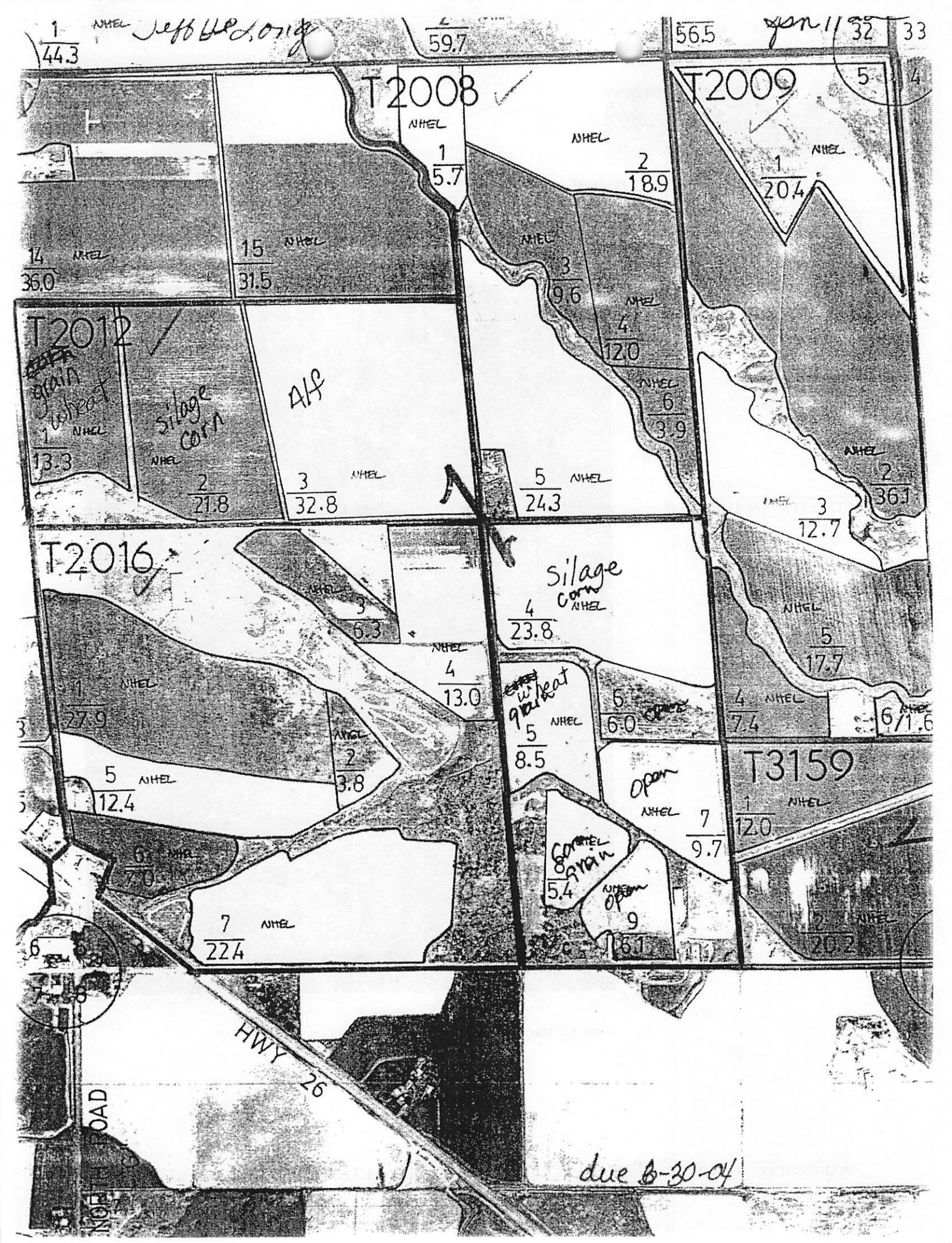
Application Schedule and Limitations

Currently, solid manure is applied to the farm ground acreage in the late fall of each year. Manure applied to the corn ground in the fall is incorporated, then the soil is bedded for the corn which is planted in the spring. Some manure is applied to the corn ground in the late spring before corn planting. Manure applied to the wheat ground is incorporated and planted.

During late spring and early summer all pens are scraped and prepared for the manure removal process. A good portion of the manure remains in the pens and is mounded for bedding for the animals. The mounding is managed such that a potential pollution hazard does not occur.

Animal Mortality Management

Deceased animals are removed from the facility and transported to a remote location where they deteriorate and compost naturally.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TerraServer USA

Search TerraServer

Street
9th Avenue

City
Vale

State
Oregon
GO

Longitude
-117.35112

Latitude
44.11276
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The National Map

9th Ave E, Vale, OR 97918
34 km SW of Weiser, Idaho, United States 01 May 19

Size
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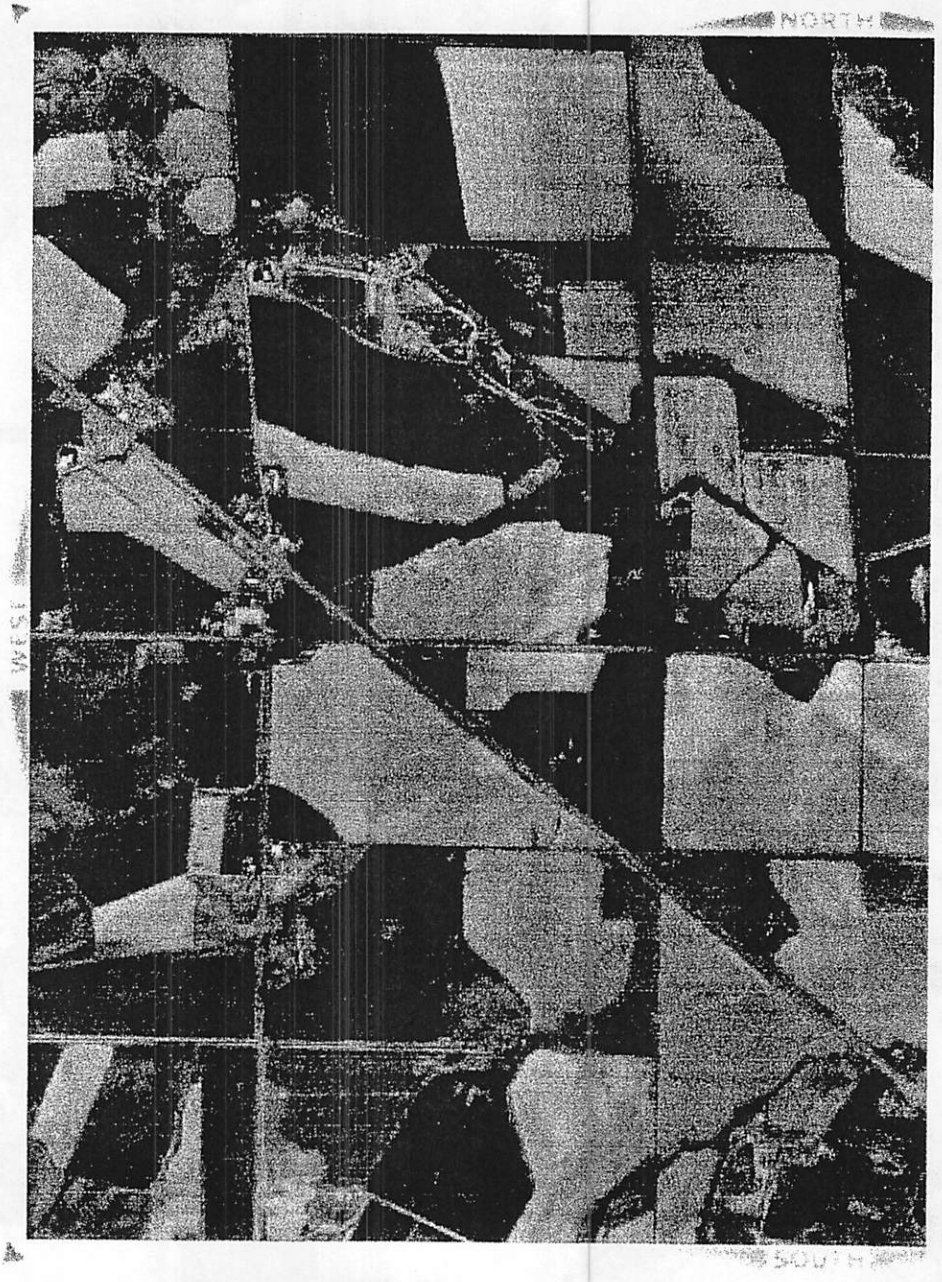
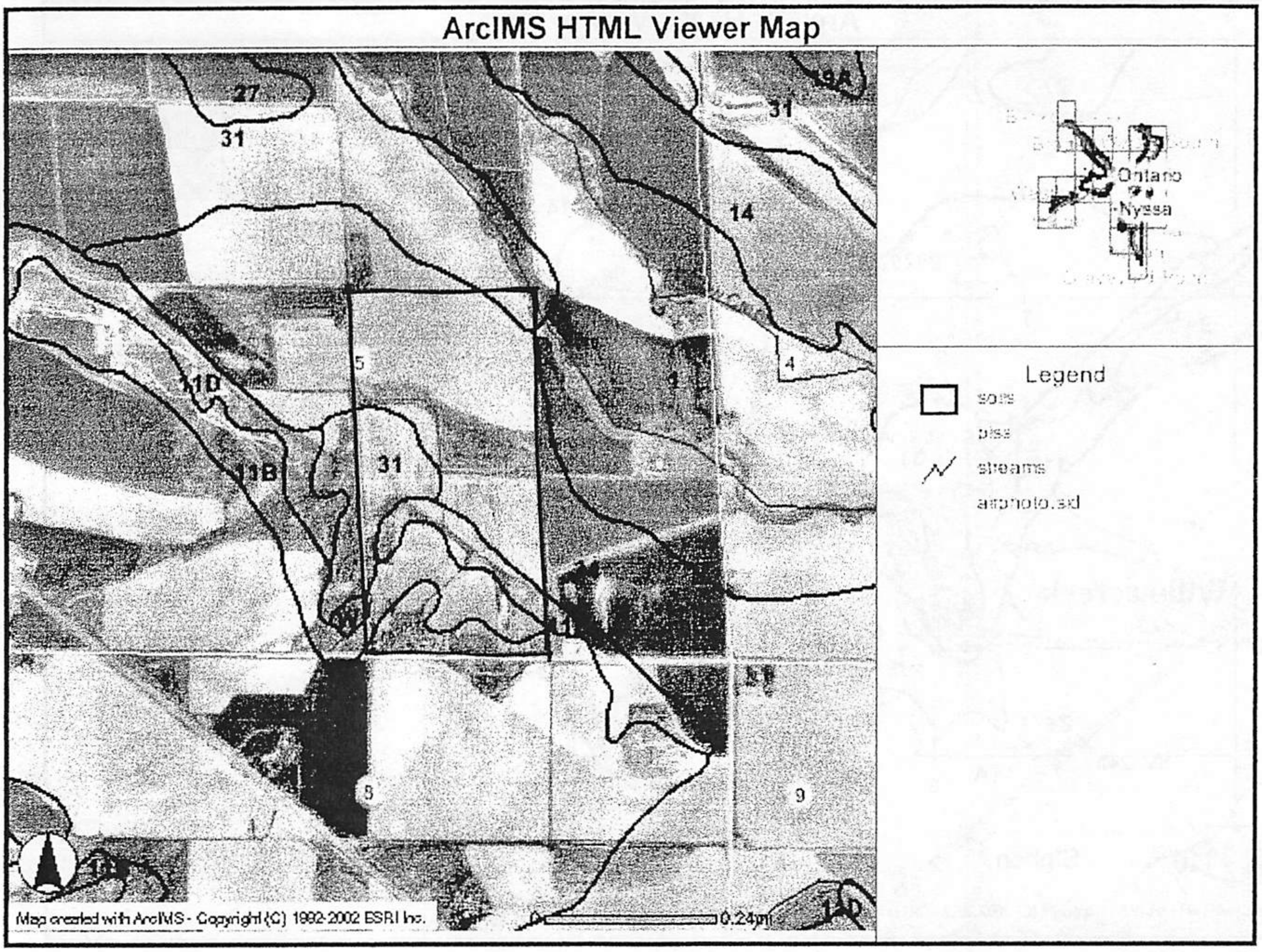


Image courtesy of the U.S. Geological Survey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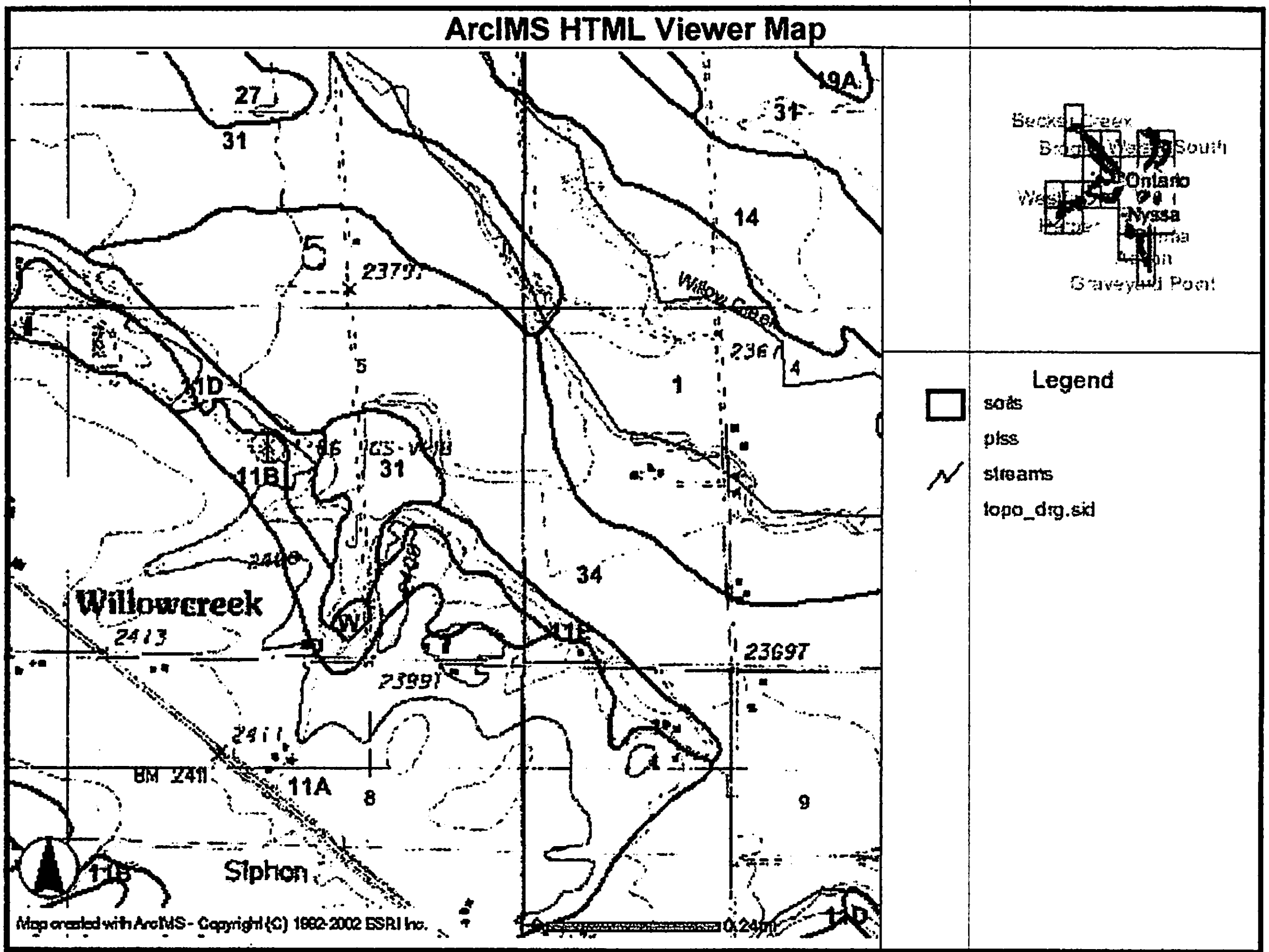

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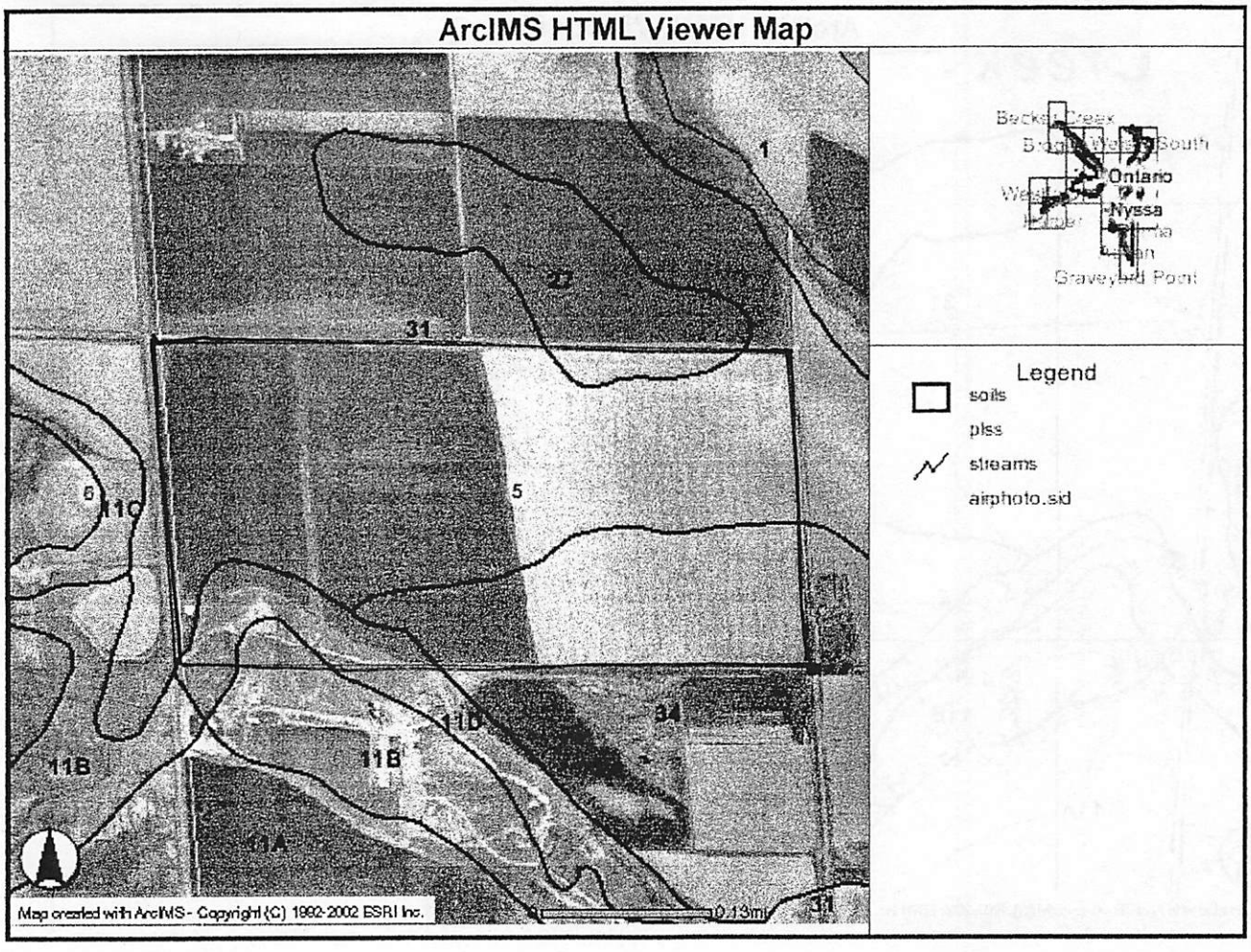
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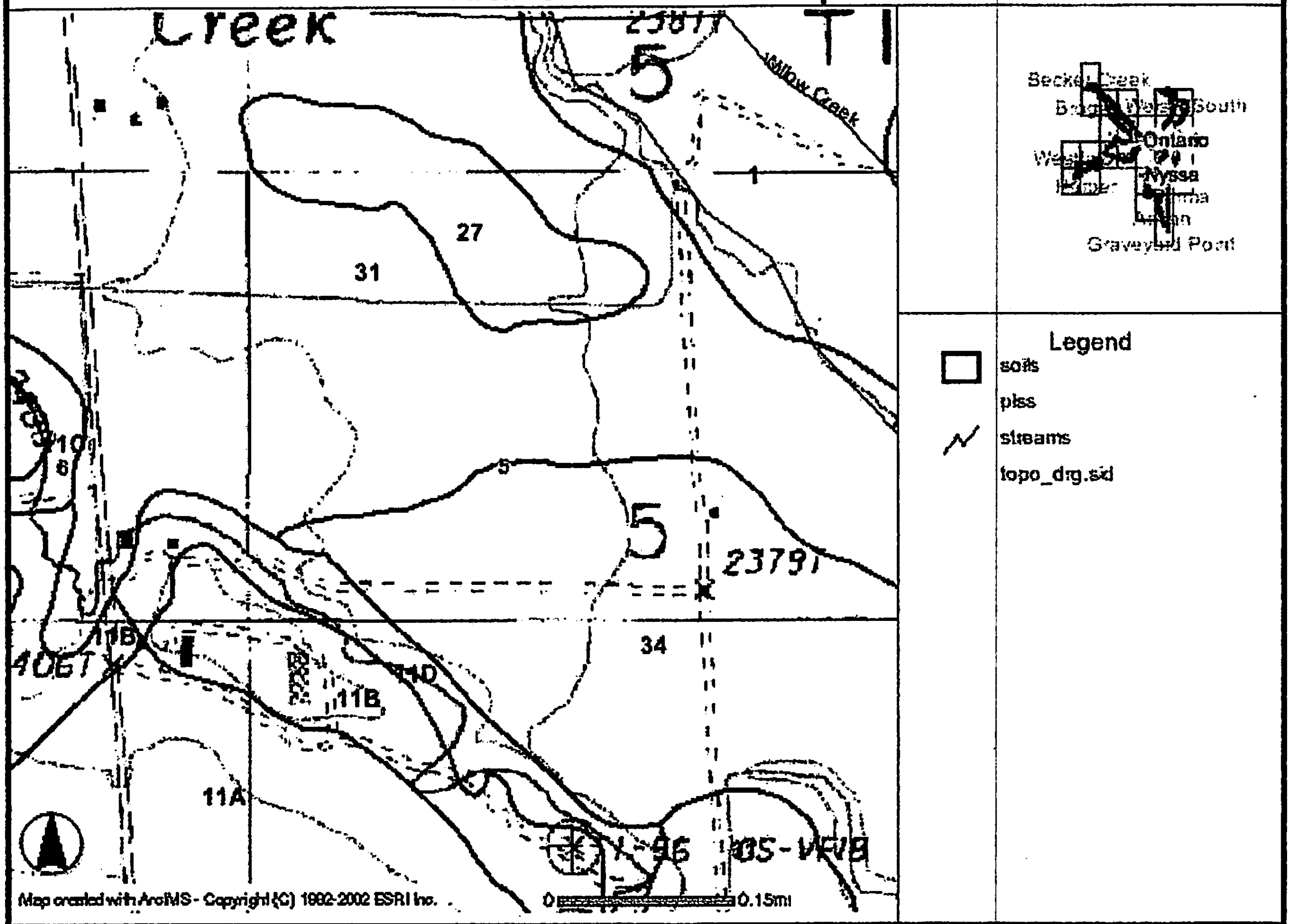

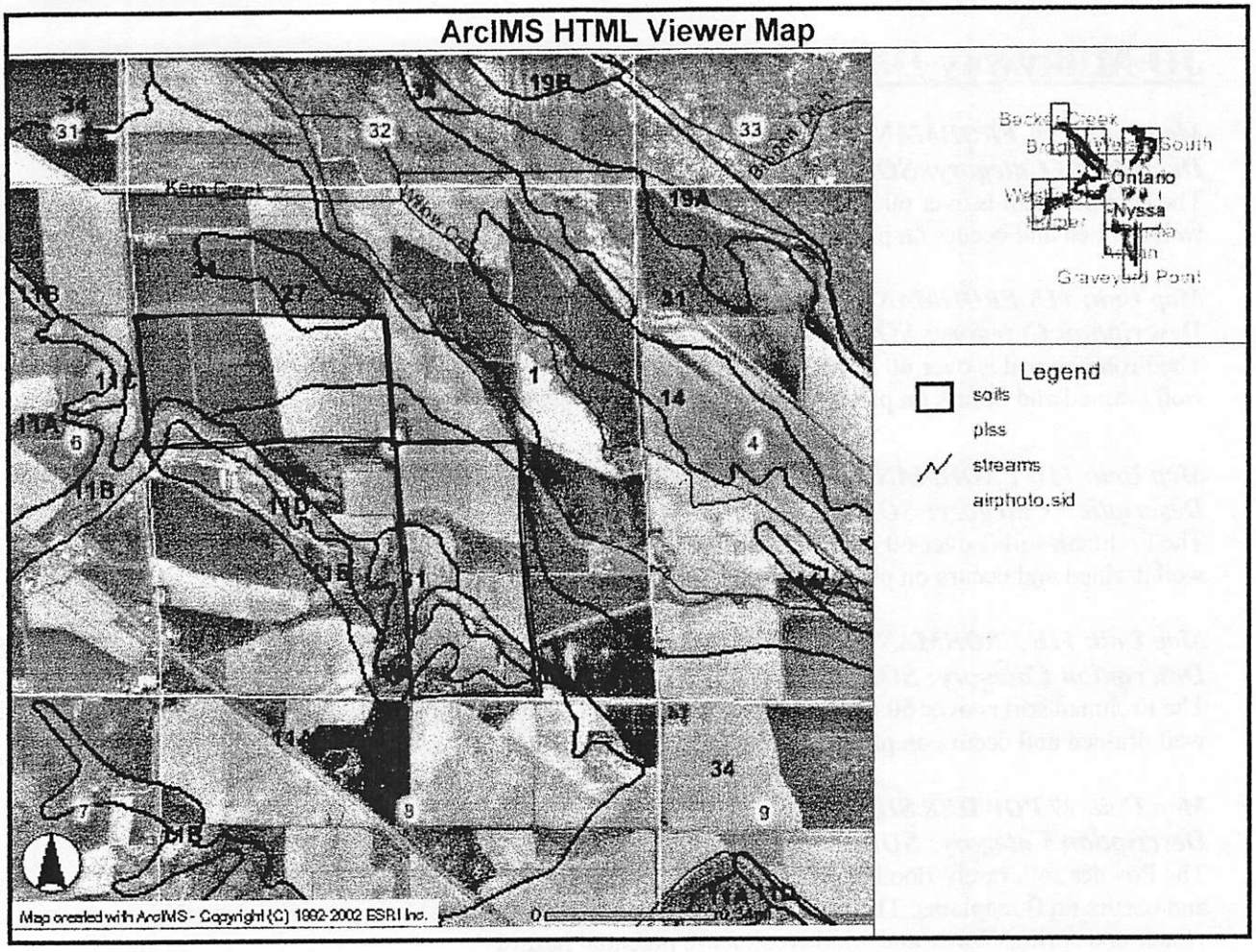
ArcIMS HTML Viewer Map
Map created with ArcIMS - Copyright (C) 1992-2002 ESRI Inc.
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JD Milkyway Dairy Soils

Map Unit: 11A FROHMAN SILT LOAM, 0 TO 2 PERCENT SLOPES
Description Category: SOI
The Frohman soil is over 60 inches deep to bedrock, a hardpan is at 10 to 20 inches. It is loamy, well drained and occurs on plateaus. Water erosion is a potential hazard.

Map Unit: 11B FROHMAN SILT LOAM, 2 TO 5 PERCENT SLOPES
Description Category: SOI
The Frohman soil is over 60 inches deep to bedrock, a hardpan is at 10 to 20 inches. It is loamy, well drained and occurs on plateaus. Water erosion is a potential hazard.

Map Unit: 11D FROHMAN SILT LOAM, 8 TO 12 PERCENT SLOPES
Description Category: SOI
The Frohman soil is over 60 inches deep to bedrock, a hardpan is at 10 to 20 inches. It is loamy, well drained and occurs on plateaus. Water erosion is a potential hazard.

Map Unit: 11E FROHMAN SILT LOAM, 12 TO 20 PERCENT SLOPES
Description Category: SOI
The Frohman soil is over 60 inches deep to bedrock, a hardpan is at 10 to 20 inches. It is loamy, well drained and occurs on plateaus. Water erosion is a potential hazard

Map Unit: 27 POWDER SILT LOAM
Description Category: SOI
The Powder soil, rarely flooded phase, is over 60 inches deep to bedrock. It is silty, well drained and occurs on floodplains. This soil is subject to flooding. A water table is present during the winter and spring. Water and wind erosion are potential hazards

Map Unit: 31 STANFIELD SILT LOAM
Description Category: SOI
The Stanfield soil is over 60 inches deep to bedrock, a cemented pan is at 20 to 40 inches. It is silty, moderately well drained and occurs on terraces. This soil is alkaline. A water table is present during the late winter, spring and early summer. Wind erosion is a potential hazard.

Map Unit: 34 UMAPINE SILT LOAM
Description Category: SOI
The Umapine soil, drained phase, is over 60 inches deep to bedrock. It is silty, moderately well drained and occurs on terraces and floodplains. This soil is subject to flooding. A water table is present during the winter and spring. Wind erosion is a potential hazard.

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Soils Data for the Eastern Oregon Phosphorus Index

SOIL SURVEY AREA NO.	SOIL SURVEY AREA NAME	MAP UNIT SYMBOL	COMPONENT NAME	COMP. PCT.	HYD. GROUP	SLOPE LOW (%)	SLOPE HIGH (%)	P INDEX RUNOFF CLASS	SURFACE TEXTURE	Kw	Kf
OR642	Malheur	1A	AHTANUM	85	D	0	2	medium	SIL	0.55	0.55
OR642	Malheur	3A	BULLY	85	B	0	2	low	SIL	0.43	0.43
OR642	Malheur	4A	CENCOVE	85	B	0	2	low	FSL	0.20	0.20
OR642	Malheur	4B	CENCOVE	85	B	2	5	low	FSL	0.20	0.20
OR642	Malheur	4C	CENCOVE	85	B	5	8	medium	FSL	0.20	0.20
OR642	Malheur	4D	CENCOVE	85	B	8	12	medium	FSL	0.20	0.20
OR642	Malheur	5A	CHILCOTT	85	D	0	2	medium	SIL	0.49	0.49
OR642	Malheur	5B	CHILCOTT	85	D	2	5	medium	SIL	0.49	0.49
OR642	Malheur	5C	CHILCOTT	85	D	5	12	high	SIL	0.49	0.49
OR642	Malheur	7A	FALK VARIANT	85	B	0	2	low	FSL	0.24	0.24
OR642	Malheur	8A	FELTHAM	85	B	0	2	low	LFS	0.20	0.20
OR642	Malheur	8B	FELTHAM	85	B	2	5	low	LFS	0.20	0.20
OR642	Malheur	8C	FELTHAM	85	B	8	12	medium	LFS	0.20	0.20
OR642	Malheur	9B	FELTHAM	85	B	2	5	low	SL	0.28	0.28
OR642	Malheur	9C	FELTHAM	85	B	5	8	medium	SL	0.28	0.28
OR642	Malheur	9D	FELTHAM	85	B	8	12	medium	SL	0.28	0.28
OR642	Malheur	10A	FELTHAM VARIANT	85	A	0	2	negligble	LFS	0.20	0.20
OR642	Malheur	11A	FROHMAN	85	C	0	2	medium	SIL	0.49	0.49
OR642	Malheur	11B	FROHMAN	85	C	2	5	medium	SIL	0.49	0.49
OR642	Malheur	11C	FROHMAN	85	C	5	8	high	SIL	0.49	0.49
OR642	Malheur	11D	FROHMAN	85	C	8	12	high	SIL	0.49	0.49
OR642	Malheur	11E	FROHMAN	85	C	12	20	high	SIL	0.49	0.49
OR642	Malheur	11F	FROHMAN	85	C	20	40	very high	GR-SIL	0.37	0.49
OR642	Malheur	12A	GARBUTT	85	B	0	2	low	SIL	0.49	0.49
OR642	Malheur	12B	GARBUTT	85	B	2	5	low	SIL	0.49	0.49
OR642	Malheur	12C	GARBUTT	85	B	5	8	medium	SIL	0.49	0.49
OR642	Malheur	12D	GARBUTT	85	B	8	12	medium	SIL	0.49	0.49
OR642	Malheur	13A	GREENLEAF	85	B	0	2	low	SIL	0.49	0.49
OR642	Malheur	13B	GREENLEAF	85	B	2	5	low	SIL	0.49	0.49
OR642	Malheur	14A	HARANA	85	B	0	2	low	SIL	0.32	0.32
OR642	Malheur	15A	HARANA	85	B	0	2	low	SICL	0.32	0.32
OR642	Malheur	15B	HARANA	85	B	2	5	low	SICL	0.32	0.32
OR642	Malheur	16A	HARANA	85	B	0	2	low	SICL	0.32	0.32
OR642	Malheur	17A	KIESEL	85	C	0	2	medium	SIL	0.43	0.43
OR642	Malheur	17B	KIESEL	85	C	2	5	medium	SIL	0.43	0.43
OR642	Malheur	18A	KIMBERLY	85	B	0	2	low	FSL	0.32	0.32
OR642	Malheur	19A	MCLOUGHLIN	85	B	0	2	low	SIL	0.55	0.55
OR642	Malheur	19B	MCLOUGHLIN	85	B	2	5	low	SIL	0.55	0.55
OR642	Malheur	19C	MCLOUGHLIN	85	B	5	8	medium	SIL	0.55	0.55
OR642	Malheur	20A	NOTUS	60	C	0	2	medium	COSL	0.28	0.28
OR642	Malheur	20A	FALK VARIANT	40	B	0	2	low	FSL	0.24	0.24
OR642	Malheur	21A	NYSSA	85	C	0	2	medium	SIL	0.37	0.37
OR642	Malheur	21B	NYSSA	85	C	2	5	medium	SIL	0.37	0.37
OR642	Malheur	21C	NYSSA	85	C	5	8	high	SIL	0.37	0.37
OR642	Malheur	21D	NYSSA	85	C	8	12	high	SIL	0.37	0.37
OR642	Malheur	21E	NYSSA	85	C	12	20	high	SIL	0.37	0.37
OR642	Malheur	22A	NYSSA	85	C	2	5	medium	SIL	0.37	0.37
OR642	Malheur	22C	NYSSA	85	C	5	8	high	SIL	0.37	0.37
OR642	Malheur	22D	NYSSA	85	C	8	12	high	SIL	0.37	0.37
OR642	Malheur	22E	NYSSA	85	C	12	20	high	SIL	0.37	0.37
OR642	Malheur	23A	NYSSA	50	C	0	2	medium	SIL	0.37	0.37

Data is from the NASIS database as of 7/2001

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Soils Data for the Eastern Oregon Phosphorus Index

SOIL SURVEY AREA NO.	SOIL SURVEY AREA NAME	MAP UNIT SYMBOL	COMPONENT NAME	COMP. PCT.	HYD. GROUP	SLOPE LOW (%)	SLOPE HIGH (%)	P INDEX RUNOFF CLASS	SURFACE TEXTURE	Kw	Kf
OR642	Malheur	23A	MALHEUR	40	C	0	2	medium	SIL	0.49	0.49
OR642	Malheur	23B	NYSSA	45	C	2	5	medium	SIL	0.37	0.37
OR642	Malheur	23B	MALHEUR	40	C	2	5	medium	SIL	0.49	0.49
OR642	Malheur	23C	NYSSA	45	C	5	8	high	SIL	0.37	0.37
OR642	Malheur	23C	MALHEUR	40	C	5	8	high	SIL	0.49	0.49
OR642	Malheur	24A	OTOOLE	85	C	0	2	medium	SIL	0.43	0.43
OR642	Malheur	25A	OWYHEE	85	B	0	2	low	SIL	0.49	0.49
OR642	Malheur	25B	OWYHEE	85	B	2	5	low	SIL	0.49	0.49
OR642	Malheur	25C	OWYHEE	85	B	5	8	medium	SIL	0.49	0.49
OR642	Malheur	25D	OWYHEE	85	B	8	12	medium	SIL	0.49	0.49
OR642	Malheur	25E	OWYHEE	85	B	12	20	medium	SIL	0.49	0.49
OR642	Malheur	26A	PODEN	85	B	0	2	low	SIL	0.28	0.28
OR642	Malheur	28A	QUINCY	85	A	0	2	negligble	LFS	0.32	0.32
OR642	Malheur	28B	QUINCY	85	A	2	5	negligble	LFS	0.32	0.32
OR642	Malheur	28C	QUINCY	85	A	8	12	very low	FS	0.17	0.17
OR642	Malheur	30A	SAGEHILL	85	B	0	2	low	FSL	0.37	0.37
OR642	Malheur	30B	SAGEHILL	85	B	2	5	low	FSL	0.37	0.37
OR642	Malheur	30C	SAGEHILL	85	B	5	8	medium	FSL	0.37	0.37
OR642	Malheur	31A	STANFIELD	85	C	0	2	medium	SIL	0.55	0.55
OR642	Malheur	32A	TRUESDALE	85	C	0	2	medium	FSL	0.24	0.24
OR642	Malheur	32B	TRUESDALE	85	C	2	5	medium	FSL	0.24	0.24
OR642	Malheur	32C	TRUESDALE	85	C	5	8	high	FSL	0.24	0.24
OR642	Malheur	32D	TRUESDALE	85	C	8	12	high	FSL	0.24	0.24
OR642	Malheur	33A	TURBYFILL	85	B	0	2	low	FSL	0.28	0.28
OR642	Malheur	33B	TURBYFILL	85	B	2	5	low	FSL	0.28	0.28
OR642	Malheur	33C	TURBYFILL	85	B	5	8	medium	FSL	0.28	0.28
OR642	Malheur	33D	TURBYFILL	85	B	8	12	medium	FSL	0.28	0.28
OR642	Malheur	35A	VIRTUE	85	C	0	2	medium	SIL	0.32	0.32
OR642	Malheur	35B	VIRTUE	85	C	2	5	medium	SIL	0.32	0.32
OR642	Malheur	35C	VIRTUE	85	C	5	8	high	SIL	0.32	0.32
OR642	Malheur	44A	WINGDALE	85	D	0	2	medium	SIL	0.28	0.28
OR642	Malheur	45A	JETT	85	B	0	2	low	SIL	0.24	0.24
OR642	Malheur	52A	WINGVILLE	85	D	0	2	medium	SIL	0.28	0.28
OR642	Malheur	53A	JUNTURA	85	D	0	2	medium	SIL	0.32	0.32
OR642	Malheur	62A	VEAZIE	45	B	0	3	low	GR-L	0.28	0.37
OR642	Malheur	68A	NEWELL	85	B	0	3	low	SIL	0.37	0.37
OR642	Malheur	75A	HOOPAL	85	D	0	2	medium	SIL	0.43	0.43
OR642	Malheur	80A	POWVAL	85	B	0	3	low	SIL	0.37	0.37
OR642	Malheur	81A	WELCH	85	D	0	2	medium	SIL	0.32	0.32
OR642	Malheur	84A	JOEVAR	85	B	0	3	low	SIL	0.37	0.37
OR642	Malheur	87A	LAWEN	85	B	0	3	low	FSL	0.17	0.17
OR642	Malheur	132A	TURBYFILL	85	B	0	2	low	FSL	0.28	0.28
OR642	Malheur	132B	TURBYFILL	85	B	2	5	low	FSL	0.28	0.28
OR642	Malheur	132BC	TURBYFILL	85	B	5	8	medium	FSL	0.28	0.28
OR642	Malheur	200A	TUCKER	85	C	0	2	medium	SIL	0.43	0.43
OR642	Malheur	201A	ZOLA	85	C	0	2	medium	L	0.32	0.32
OR642	Malheur	205A	TUCKER	45	C	0	2	medium	SIL	0.43	0.43
OR642	Malheur	205A	ZOLA	40	C	0	2	medium	SIL	0.37	0.37
OR642	Malheur	208A	WELCH	50	D	0	2	medium	SIL	0.32	0.32
OR642	Malheur	208A	ZOLA	40	C	0	2	medium	L	0.32	0.32
OR642	Malheur	209A	WITHERS	85	C	0	2	medium	SICL	0.37	0.37

Data is from the NASIS database as of 7/2001

Agronomy Technical Note 26 - Appendix 4

Soils Data for the Eastern Oregon Phosphorus Index

SOIL SURVEY AREA NO.	SOIL SURVEY AREA NAME	MAP UNIT SYMBOL	COMPONENT NAME	COMP. PCT.	HYD. GROUP	SLOPE LOW (%)	SLOPE HIGH (%)	P INDEX RUNOFF CLASS	SURFACE TEXTURE	Kw	Kf
OR642	Malheur	230B	MORFITT	85	B	2	5	low	L	0.37	0.37
OR642	Malheur	230C	MORFITT	85	B	5	12	medium	L	0.37	0.37
OR642	Malheur	230E	MORFITT	85	B	12	20	medium	L	0.37	0.37
OR642	Malheur	260A	VICKERY	85	C	0	2	medium	SIL	0.49	0.49
OR642	Malheur	260B	VICKERY	85	C	2	5	medium	SIL	0.49	0.49
OR642	Malheur	260C	VICKERY	85	C	5	8	high	SIL	0.49	0.49
OR642	Malheur	260D	VICKERY	85	C	8	12	high	SIL	0.49	0.49
OR642	Malheur	455B	BROWNSCOMBE	85	C	2	8	medium	SIL	0.32	0.32
OR642	Malheur	516C	VIRTUE	60	C	1	10	high	SIL	0.32	0.32
OR642	Malheur	560BC	VIRTUE	85	C	1	10	high	SIL	0.32	0.32
OR642	Malheur	610B	MADRAS	85	B	2	8	low	CB-L	0.20	0.32
OR642	Malheur	615B	ENCINA	85	B	2	5	low	SIL	0.32	0.32
OR642	Malheur	615C	ENCINA	85	B	5	12	medium	SIL	0.32	0.32
OR642	Malheur	710B	DAVEY	85	B	0	8	low	SL	0.20	0.20
OR642	Malheur	770C	GOLDRUN	55	A	2	12	very low	LS	0.17	0.17
OR642	Malheur	785B	MCCONNEL	85	B	3	8	medium	GR-FSL	0.32	0.64

Agronomy Technical Note 26 – Appendix 2

October 2001

PHOSPHORUS INDEX WORKSHEET – **EASTERN** OREGON

Producer: JD Milkyway Dairy County: MALHEUR Tract No. _____ Field No(s). #2 Date: 3/11/2005

Soil Map Unit(s): _____ Soil Test P: _____ ppm Lab. Method: _____ Sample Depth: _____

Crop Rotation: _____ Nutrient Application Method(s) _____

Planner: _____ Notes: _____

		PHOSPHORUS LOSS RATING					Weighted Rating Value	
TRANSPORT FACTORS	Factor Weight	None (0)	Low (1)	Medium (2)	High (4)	Very High (8)	**Current**	**Planned**
Soil Erosion – tons/ac/yr (RUSLE and/or WEQ)	1.50	< 1 (0)	1 – 3 (1.5)	4 – 6 (3.0)	7 – 15 (6.0)	> 15 (12.0)	1.5	
Soil Erosion from Sprinkler Irrigation	0.25	No sprinkler irrigation (0)	Application rate < infiltration rate OR No visible runoff at field borders (0.25)	Application rate = infiltration rate OR Little to no visible runoff at field borders (0.5)	Application rate > infiltration rate OR Visible runoff at field borders (2.0)	Application rate > infiltration rate OR Excessive runoff visible at field borders. Rills and gullies present. (4.0)	0	
Soil Erosion from Surface Irrigation – tons/ac/yr (SISL)	1.00	< 1 (0)	1 – 3 OR tail water return flow in place (1.0)	4 – 6 (2.0)	7 – 15 (4.0)	> 15 (8.0)	1	
Runoff Class	1.00 – nonirri-gated 0.50 - irrigated	Negligible (0)	Very low or low (0.5 IRR, 1.0 NIRR)	Medium (1.0 IRR, 2.0 NIRR)	High (2.0 IRR, 4.0 NIRR)	Very High (4.0 IRR, 8.0 NIRR)	1	
Distance to Perennial Surface Waters / Buffer Widths	0.50	> 500 feet OR buffer > 30 ft. wide (or meets NRCS standards) next to surface waters (0)	300 – 500 feet OR buffer 20 - 30 ft. wide next to surface waters (0.5)	200 – 299 feet OR buffer 10 -19 ft. wide next to surface waters (1.0)	100 – 199 feet AND buffer < 10 ft. wide next to surface waters (2.0)	< 100 feet AND No buffer next to surface waters OR Return flow from surface irrigation occurs with no buffer (4.0)	.5	

PHOSPHORUS INDEX WORKSHEET – **EASTERN** OREGON

Subsurface Drainage	0.50	No tile drains (0)	Tile drains present Soil Test P (Olsen) < 40 ppm (0.5)	Tile drains present Soil Test P (Olsen) 40 - 120 ppm (1.0)	Tile drains present Soil Test P (Olsen) 121 - 170 ppm (2.0)	Tile drains present Soil Test P (Olsen) > 170 ppm (4.0)	0	
						Transport Factors Subtotal (TFS)	4	

Tract _____ Fields _____

SOURCE FACTORS	Factor Weight	PHOSPHORUS LOSS RATING None (0)	Low (1)	Medium (2)	High (4)	Very High (8)	Weighted Rating Value Current	Planned
Soil Test P – 0-12" ppm (Olsen $NaHCO_3$)	1.00	(Soil Test P – 20) x 0.10	(-16 (Soil Test P) - 20) x 0.10 = 1.6			Assign 0 points if Soil Test P < 20 ppm	0	
Commercial P Fertilizer Application Rate	1.00	lbs/ac P_2O_5 x 0.02	_____ (lbs/ac P_2O_5) x 0.02 = 3.54				3.5	
Commercial P Fertilizer Application Method	1.00	None Applied (0)	Placed with planter OR Injected deeper than 2 inches OR Incorporated by plowing (1.0)	Incorporated deeper than 3 inches by disking, chiseling, etc. (2.0)	Incorporated less than 3 inches deep by harrowing, etc. (4.0)	Surface applied – not incorporated prior to irrigation or winter precipitation (8.0)	1	
Organic P Source Application Rate	1.00	lbs/ac P_2O_5 x 0.02	80 (lbs/ac P_2O_5) x 0.02 = 1.6				1.6	
Organic P Source Application Method	1.00	None Applied (0)	Injected deeper than 2 inches OR Incorporated immediately (1.0)	Incorporated deeper than 3 inches by disking, chiseling, etc. within 5 days of application (2.0)	Incorporated less than 3 inches deep by harrowing, etc. within 21 days of application (4.0)	Surface applied – not incorporated prior to irrigation or winter precipitation (8.0)	1	

Total Rating Value TFS x SFS	Site Vulnerability Class

	Current	Planned
Transport Factors Subtotal (TFS)	4	
Source Factors Subtotal (SFS)	7.10	

PHOSPHORUS INDEX WORKSHEET – **EASTERN**

2

< 30	Low
30 – 100	Medium
100 – 400	High
> 400	Very High

Total Rating Value (TFS x SFS)	28.4	
Site Vulnerability Class	Low	

Western Laboratories, Inc.
211 Highway 95 • P.O. Box 1020 • Parma, ID 83660
800-658-3858 • FAX 208-722-6550
http://www.westernlaboratories.com

Dealer: 2-4
Reported: 3/11/2005
Test #: 1
Grower: **Jeff Delong**
Field ID: **Behind House**

Lab #:
47313
SV #:

AGRICULTURAL SOIL REPORT

ELEMENT	ANSWER	INTERP	Should Be
pH-Soil	8.0	Moderately Basic	
pH-SMP			
Soluble Salts	0.10	Normal	< 1.5
% Lime	0.5	Potential Sealing	
% Organic Matter	0.8	Very Low	
Nitrates-ppm	12	Adequate	10 - 35
Ammonium-ppm	5	Low	5 +
Phosphorus-ppm	4	Very Low	25 - 40
Phos-ppm-Bray			50 - 100

ELEMENT	ANSWER	INTERP	Should Be
Potassium-ppm	258	Low	300 +
Sulfate-ppm	11	Low	20 +
Calcium-ppm	2600	Adequate	1,800 +
Magnesium-ppm	330	Adequate	250 +
Sodium-ppm	117	OK	< 225
Zinc-ppm	0.6	Low	1.0 - 3.0
Copper-ppm	0.5	Low	0.8 - 2.5
Manganese-ppm	3	Very Low	6 - 30
Iron-ppm	3	Very Low	7 +
Boron-ppm	0.4	Low	0.7 - 1.5

Texture	Loam
Cation Exchange Capacity - CEC	17
Percent Base Saturation	100

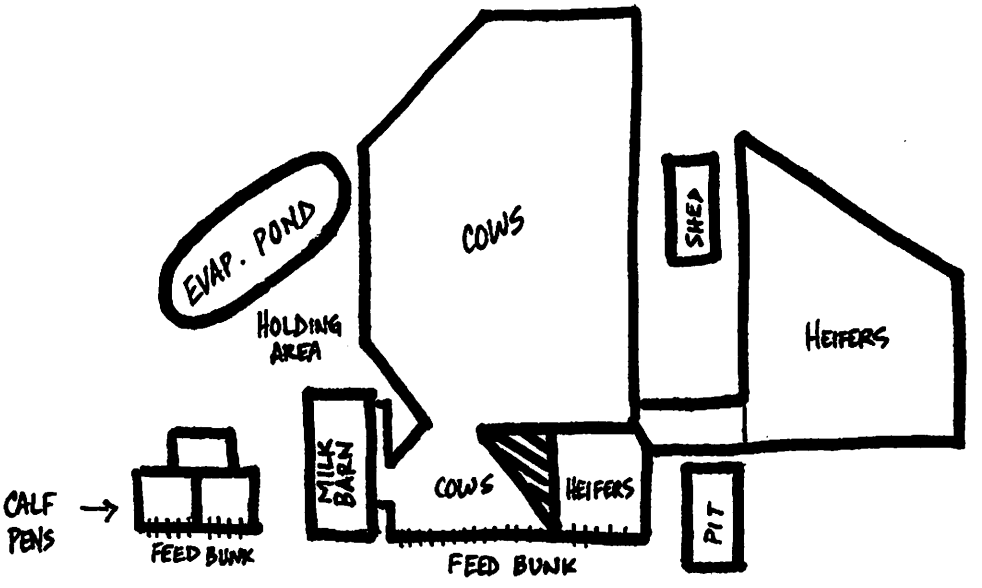
BASES	IDEAL	YOURS
Calcium-% of CEC	65-80%	76
Magnesium-% of CEC	10-20%	16
Potassium-% of CEC	2-6%	3.9
Sodium-% of CEC	< 5%	3
Hydrogen-% of CEC	< 15%	

	NO3 ppm	NH4 ppm
1st Foot	12	5
2nd Foot		
3rd Foot		
4th Foot		

Ratio	Ideal	Yours	Evaluation	Recommendations
N:S	10:1	1:1	OK	
Ca:Mg	6-20:1	8:1	OK	
Ca:K pH >7	15:1	10:1	OK	
Ca:K pH <7	10:1	:1		
Ca:P pH >7	100:1	634:1	High	Watch P
Ca:P pH <7	40:1	:1		
P:Zn	15:1	7:1	OK	
P:Mn	4:1	1:1	OK	
P:Cu	25:1	8:1	OK	
Zn:Cu	2:1	1:1	OK	
Mn:Zn	3:1	5:1	High	Watch Zn
Mn:Cu	5:1	6:1	High	Watch Cu
K:B	200:1	645:1	High	Watch B
Mg:K	2:1	1:1	Low	Watch Mg

Nutrient Suggestions Pounds per Acre		
Crop	SW Wheat	Ear Corn
Yield Goal	150	6
Past Crop	SW Wheat	
Acres	15	
Nitrogen	209	239
Phosphate	177	219
Potash	117	102
Sulfates	23	32
Elemental Sulfur	40	
Gypsum		
Lime		
Dolomite		
Magnesium		
Zinc	5	10
Iron		
Manganese	2	5
Copper	1	
Boron	2	2

"Always practice the laws of Agronomy."
John P. Taberna, Soil Scientist


EVAP. POND
HOLDING AREA
COWS
SHED
HEIFERS
MILK BARN
COWS
HEIFERS
PIT
CALF PENS
FEED BUNK
FEED BUNK

U.S. Department of Agriculture
Natural Resources Conservation Service

ANIMAL WASTE MANAGEMENT WORKSHEET

Version 2.0

5/31/05
STATE: OREGON

CLIENT: ID Milkyway Dairy
ASSISTED BY: Angela Dean CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM INVENTORY

ANIMAL INVENTORY

Type of Animal	Number of Animals	Average Weight (lbs.)	Animal Units (1,000 lb.)	Milk Production in Pounds/Cow/Day= 70						Manure CF/D/AU	Annual	
				Nutrient Production								
				(lbs./day/1000 lb. Animal Unit)			(lbs./day)				Days Confined	Days Grazed
				N	P	K	N	P	K			
MILKER	150	1,300	195.0	0.57	0.09	0.32	112.07	18.26	61.83	1.57	365	0
HEIFERS (12-24 Months)	50	750	37.5	0.31	0.04	0.24	11.63	1.50	9.00	1.30	365	0
CALVES (1-12 Months)	30	250	7.5	0.31	0.04	0.24	2.33	0.30	1.80	1.30	365	0
CALVES (1-12 Months)	30	450	13.5	0.31	0.04	0.24	4.19	0.54	3.24	1.30	365	0
CALVES (1-12 Months)	35	100	3.5	0.31	0.04	0.24	1.085	0.14	0.84	1.30	365	0
Totals/Averages-	295	570	257.0	0.51	0.08	0.30	131.3	20.7	76.7	1.5		

GRAZING PERIOD

Type of Animal	Percent of Month and Number of Animals Grazing												
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	AU-YR.
MILKER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	150	150	150	150	150	150	150	150	150	150	150	150	0
HEIFERS (12-24 Months)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	50	50	50	50	50	50	50	50	50	50	50	50	0
CALVES (1-12 Months)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	30	30	30	30	30	30	30	30	30	30	30	30	0
CALVES (1-12 Months)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	30	30	30	30	30	30	30	30	30	30	30	30	0
CALVES (1-12 Months)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	35	35	35	35	35	35	35	35	35	35	35	35	0
													0
													0
													0
													0
													0
Total AUM's Available>	0						0	0	0	0	0	0	0
Total AUM's Needed>>>	0	0	0	0	0	0	0	0	0	0	0	0	0
Total AUM's>>>>>>>>>>	0	0	0	0	0	0	0	0	0	0	0	0	0

ANIMAL WASTE MANAGEMENT WORKSHEET
Version 2.0

CLIENT: JD Milkyway Dairy
ASSISTED BY: Angela Dean CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM INVENTORY

WEATHER STATION: MALHEUR BRANCH EXP S

Month	Precipitation (Monthly Average in Inches)	Evaporation (Monthly Average in Inches)	Paved (Lot Runoff Factors as a Percent of Monthly Precipitation)	Unpaved (Lot Runoff Factors as a Percent of Monthly Precipitation)
25Yr-24Hr	1.80			
October	0.71	1.98	30%	0%
November	1.21	0.50	35%	0%
December	1.32	0.71	25%	0%
January	1.26	0.74	25%	0%
February	0.98	1.09	25%	0%
March	0.92	2.06	20%	0%
April	0.70	3.79	25%	0%
May	0.98	5.12	30%	0%
June	0.83	6.08	35%	0%
July	0.19	7.62	30%	0%
August	0.38	6.51	30%	0%
September	0.49	4.03	30%	0%
Annual	9.97	40.23		

AREAS CONTRIBUTING RUNOFF TO LIQUID STORAGE FACILITY

Description of Runoff Area	Area in SF
Paved Lot Area >>> Is paved lot scraped daily? (Y/N) NO	15,000
Unpaved Lot Area >>>	0
Roof Area >>	0
Surface Area of Silage Storage Facility>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> Does Silage Seepage Drain to Storage Facility? (Y/N) NO	0
Total Runoff Area Contributing to Liquid Storage Facility>>>>>>>>>>>>>>>	15,000

WATER USE THAT ENTERS LIQUID STORAGE FACILITY

Type of Water Use	Number of Animals	Number of Washes per Day	Gallons of Water Used per Wash-Day	Total Water Use per Day, Gallons	Total Water Use per Day, Cubic Feet
Animal Washwater	150.0	2	5.00	1500	200.5
Equipment Wash		2	10.00	20	2.7
Flushwater		2	25.00	50	6.7
Miscellaneous		2	0.00	0	0.0
Total>>				1570	209.9

CROP DATA

Field Number	Acres	Crop	Condition	Yield Units	Target Yield	Nutrients Removed in Pounds per Acre: Nitrogen N	Phosphorous P2O5	Potassium K2O
1	32.0	Alfalfa Hay	DHM	Ton	7.00	315	71	315
2	46.0	Corn, Silage(AH)	As Harvested	Ton	28.00	216	112	257
3	34.0	Corn, Grain	DHM	Ton	6.00	193	77	58
4	26.0	Wheat, Winter Soft White	DHM	Bu	130.00	130	69	31
Off-Farm								

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BEDDING VOLUME

Type of Animal	Type of Bedding Facility	Bedding Material	Unit Weight Lbs/CF	Amount Needed Lbs/Day/AU	Volume CF/Day/AU	Total Volume CF/Day	Total Weight Lbs/Day
MILKER	Confined	Soil	75.00	1.50	0.02	4	293
HEIFERS (12-24 Months)	Confined	Soil	75.00	1.50	0.02	1	56
CALVES (1-12 Months)	Confined	Soil	75.00	1.50	0.02	0	11
CALVES (1-12 Months)	Confined	Soil	75.00	1.50	0.02	0	20
CALVES (1-12 Months)	Confined	Loose Straw	2.50	2.60	1.04	4	9

SOLIDS SEPARATION FACTOR

Type of Animal	Type of Separator	Separation Factor %	Volume of Solids Separated CF/Day	Volume of Solids in Liquids CF/Day	Volume of Manure in Liquids CF/Day	Volume of Manure in Solids CF/Day	Accumulated Sludge in Storage CF/Day	Density of Separated Solids Lbs/CF	Weight of Separated Solids Lbs/Day
MILKER	Dry Scrape System	75%	233	78	77	230	51	36	8,385
HEIFERS (12-24 Months)	Dry Scrape System	100%	50	0	0	49	0	36	1,782
CALVES (1-12 Months)	Dry Scrape System	100%	10	0	0	10	0	36	356
CALVES (1-12 Months)	Dry Scrape System	100%	18	0	0	18	0	36	642
CALVES (1-12 Months)	Dry Scrape System	100%	8	0	0	5	0	36	295
Total Solids>>>			318	78	77	311	51		11,459

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CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM PRODUCTION

MONTHLY VOLUMES

Month	Runoff in Cubic Feet: Roof Area Square Feet 0	Paved Slab Area Square Feet 15,000	Unpaved Lot Area Square Feet 0	Silage Pit Surface Area, SF 0	Facility Water Use Cubic Feet	Manure: Solids Cubic Feet	Manure: Liquids Cubic Feet	Bedding: Cubic Feet	Bedding: Pounds	Solids Separated: Cubic Feet	Solids Separated: Pounds	Solids in Liquids: Cubic Feet	Solids in Liquids: Pounds	Total Solids Cubic Feet	Total Liquids Cubic Feet
October	0	266	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,556
November	0	529	0	0	6,297	3,568	8,049	261	11,681	9,549	343,778	2,329	83,845	9,549	11,532
December	0	413	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,702
January	0	394	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,684
February	0	306	0	0	5,877	3,330	7,513	244	10,902	8,913	320,859	2,174	78,255	8,913	10,733
March	0	230	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,520
April	0	219	0	0	6,297	3,568	8,049	261	11,681	9,549	343,778	2,329	83,845	9,549	11,221
May	0	368	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,657
June	0	363	0	0	6,297	3,568	8,049	261	11,681	9,549	343,778	2,329	83,845	9,549	11,365
July	0	71	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,361
August	0	143	0	0	6,507	3,687	8,318	270	12,070	9,868	355,237	2,407	86,640	9,868	11,432
September	0	184	0	0	6,297	3,568	8,049	261	11,681	9,549	343,778	2,329	83,845	9,549	11,186
Annual	0	3,485	0	0	76,611	43,409	97,932	3,179	142,113	116,184	4,182,632	28,337	1,020,115	116,184	136,950

DAILY NUTRIENT PRODUCTION

Type of Animal	Pounds/Day of Nutrients from LIQUIDS: N	P_2O_5	K_2O	Pounds/Day of Nutrients from SOLIDS: N	P_2O_5	K_2O	Pounds/Day of Nutrients from GRAZING: N	P_2O_5	K_2O
MILKER	28.02	10.46	18.63	84.05	31.37	55.88	112.07	41.83	74.51
HEIFERS (12-24 Months)	0.00	0.00	0.00	11.63	3.44	10.85	11.63	3.44	10.85
CALVES (1-12 Months)	0.00	0.00	0.00	2.33	0.69	2.17	2.33	0.69	2.17
CALVES (1-12 Months)	0.00	0.00	0.00	4.19	1.24	3.90	4.19	1.24	3.90
CALVES (1-12 Months)	0.00	0.00	0.00	1.09	0.32	1.01	1.09	0.32	1.01
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CLIENT: JD Milkyway Dairy
ASSISTED BY: Angela Dean

CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM PRODUCTION

MONTHLY NUTRIENT PRODUCTION

Month	Pounds of Nutrients from LIQUIDS			Pounds of Nutrients from SOLIDS			Pounds of Nutrients from GRAZING			Pounds of Nutrients going OFF-FARM			Total Pounds of Nutrients from ALL SOURCES		
	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
October	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
November	841	314	559	3,098	1,112	2,214	0	0	0	0	0	0	3,939	1,425	2,773
December	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
January	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
February	784	293	522	2,892	1,037	2,067	0	0	0	0	0	0	3,676	1,330	2,588
March	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
April	841	314	559	3,098	1,112	2,214	0	0	0	0	0	0	3,939	1,425	2,773
May	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
June	841	314	559	3,098	1,112	2,214	0	0	0	0	0	0	3,939	1,425	2,773
July	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
August	869	324	577	3,201	1,149	2,288	0	0	0	0	0	0	4,070	1,473	2,866
September	841	314	559	3,098	1,112	2,214	0	0	0	0	0	0	3,939	1,425	2,773
Annual	10,226	3,817	6,799	37,694	13,524	26,942	0	0	0	0	0	0	47,920	17,341	33,741

U.S. Department of Agriculture
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Version 2.0

5/31/05
STATE: OREGON

CLIENT: **JD Milkyway Dairy**
ASSISTED BY: **Angela Dean**

CHECKED BY:

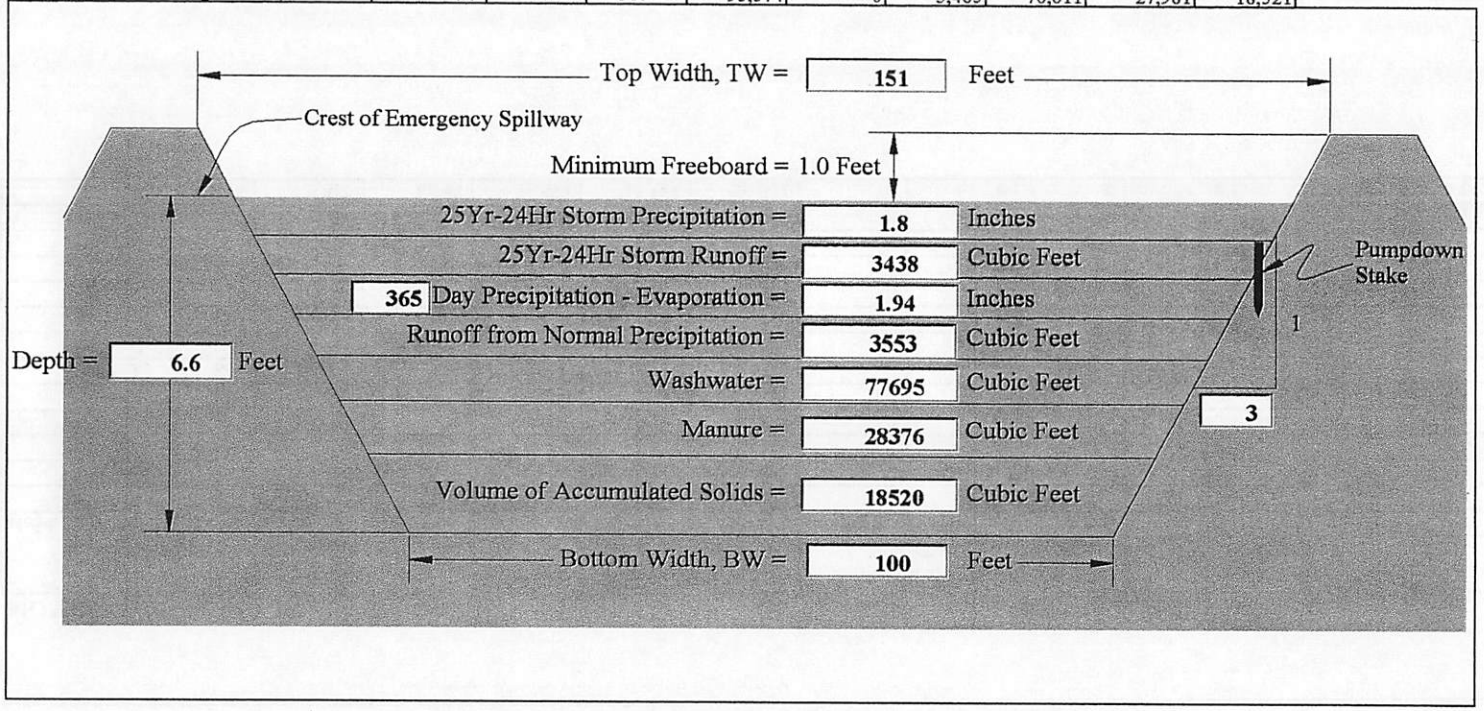
ANIMAL WASTE MANAGEMENT SYSTEM STORAGE

WASTE STORAGE POND

Pond Parameters	Value
Storage Period, Days=	365
Side Slope (X:1)=	3.00
Bottom Width, BW, Feet=	100
Bottom Length, BL, Feet=	200
Accumulated Solids Duration, Years=	1
Existing Storage, Acre Feet=	0.00
Surface Area of Existing Storage, SF=	0
Minimum Soil Liner Depth, Feet=	1.00
25 Year-24 Hour Storm Runoff, CF=	3,438
Top Width, TW, Feet=	151
Top Length, TL, Feet=	251
Volume Needed, Acre Feet=	3.0
Design Volume, Acre Feet=	4.0

MONTHLY INFLOWS INTO WASTE STORAGE POND

Month	Number of Days	Rain-Evap on Pond CF	Rain-Evap on Existing Storage, CF	Normal Runoff CF	Washwater CF	Manure CF	Accum Solids CF
October	31	-4,011	0	266	6,507	2,376	1,573
November	30	2,242	0	529	6,297	2,300	1,522
December	31	1,927	0	413	6,507	2,376	1,573
January	31	1,642	0	394	6,507	2,376	1,573
February	28	-347	0	306	5,877	2,146	1,421
March	31	-3,601	0	230	6,507	2,376	1,573
April	30	-9,760	0	219	6,297	2,300	1,522
May	31	-13,076	0	368	6,507	2,376	1,573
June	30	-16,582	0	363	6,297	2,300	1,522
July	31	-23,467	0	71	6,507	2,376	1,573
August	31	-19,361	0	143	6,507	2,376	1,573
September	30	-11,181	0	184	6,297	2,300	1,522
Annual	365	-95,574	0	3,485	76,611	27,981	18,521



CLIENT: **JD Milkyway Dairy**
ASSISTED BY: **Angela Dean**

CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM APPLICATION

MANAGEMENT CRITERIA FOR TRACTOR SPREADER APPLICATION OF SOLIDS

To apply **116,184** cubic feet of solids generated from the operation it will take approximately **584** trips annually. Based on applying NITROGEN, N at agronomic rate use the application depths, travel lengths, and loads per acre listed below for each crop.

Field Number	Acres	Crop	Tractor Spreader Capacity		Spread Width	NITROGEN, N Concentration in Storage Facility		Pounds of Nutrients to be Applied	Number of Applications Needed to meet Crop Demand	Inches of Solids to Apply	Travel Length per Load Needed in Feet	Loads per Acre
			Bushels	CF	Feet	PPM	Lbs/100CF					
1	32	Alfalfa Hay	160	199	15	3,379	21.09	315	1.00	0.6	246	12
2	46	Corn, Silage(AH)	160	199	15	3,379	21.09	216	1.00	0.4	360	8
3	34	Corn, Grain	160	199	15	3,379	21.09	193	1.00	0.4	402	7
4	26	Wheat, Winter Soft White	160	199	15	3,379	21.09	130	1.00	0.3	597	5
0												
0												
0												
0												
0												

U.S. Department of Agriculture
Natural Resources Conservation Service

ANIMAL WASTE MANAGEMENT WORKSHEET

Version 2.0

5/31/05
STATE: OREGON

CLIENT: JD Milkyway Dairy
ASSISTED BY: Angela Dean

CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM UTILIZATION

NUTRIENTS AVAILABLE AFTER STORAGE

Nutrient Source	Type of Operation: Dairy / Type of Storage Facility	Pounds of Nutrients Available			Percent Nutrients Retained After Storage			Pounds of Nutrients Retained After Storage		
		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Liquids	Storage Pond (>50%) Dilution	10,226	3,817	6,799	30%	65%	80%	3,095	2,481	5,439
Solids	Open Lot (Arid Region)	37,694	13,524	26,942	65%	90%	90%	24,501	12,172	24,248
Grazing	NONE	0	0	0	100%	100%	100%	0	0	0

NUTRIENTS AVAILABLE AFTER APPLICATION

Nutrient Source	Type of Application System	Pounds of Nutrients Available			Percent Nutrients Retained After Application			Pounds of Nutrients Retained After Application		
		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Liquids	Broadcast (Incorporated 7 or more days after application)	3,095	2,481	5,439	70%	100%	100%	2,167	2,481	5,439
Solids	Broadcast (Incorporated 7 or more days after application)	24,501	12,172	24,248	70%	100%	100%	17,151	12,172	24,248
Grazing	Grazing	0	0	0	90%	100%	100%	0	0	0

NUTRIENTS AVAILABLE AFTER DENITRIFICATION

Nutrient Source	Location: East of Cascade Mountains / Soil Drainage Class	Pounds of Nutrients Available			Percent Nutrients Retained After Denitrification			Pounds of Nutrients Retained After Denitrification		
		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Liquids	Moderately Well Drained	2,167	2,481	5,439	91%	100%	100%	1,972	2,481	5,439
Solids	Moderately Well Drained	17,151	12,172	24,248	91%	100%	100%	15,607	12,172	24,248
Grazing	Somewhat Poorly Drained	0	0	0	87%	100%	100%	0	0	0

U.S. Department of Agriculture
Natural Resources Conservation Service

ANIMAL WASTE MANAGEMENT WORKSHEET

Version 2.0

5/31/05
STATE: OREGON

CLIENT: JD Milkyway Dairy
ASSISTED BY: Angela Dean

CHECKED BY:

ANIMAL WASTE MANAGEMENT SYSTEM UTILIZATION

PERCENT OF MANURE TO BE APPLIED TO FIELD AND UTILIZATION ACRES NEEDED BASED ON NITROGEN, N

Field Number	Acres	Crop	LIQUIDS Percent to be Applied	LIQUIDS Pounds of Nutrients to be Applied	LIQUIDS Acres Needed for Utilization of Nutrients	SOLIDS Percent to be Applied	SOLIDS Pounds of Nutrients to be Applied	SOLIDS Acres Needed for Utilization of Nutrients	GRAZING Percent to be Applied	GRAZING Pounds of Nutrients to be Applied	GRAZING Acres Needed for Utilization of Nutrients
1	32.0	Alfalfa Hay	0%	0	0	0%	0	0	0%	0	0
2	46.0	Corn, Silage(AH)	25%	498	2	25%	3,941	18	0%	0	0
3	34.0	Corn, Grain	10%	197	1	10%	1,561	8	0%	0	0
4	26.0	Wheat, Winter Soft White	10%	197	2	10%	1,561	12	0%	0	0
0											
0											
0											
0											
0											
Off-Farm			55%	1,079		55%	8,545		100%	0	
		TOTALS-	100%	1,972	5	100%	15,607	38	100%	0	0

NUTRIENT BALANCE BASED ON AVAILABLE ACRES

Field Number	Acres	Crop	NUTRIENTS APPLIED Nitrogen, N Lbs/Acre	NUTRIENTS APPLIED Phosphorous, P_2O_5 Lbs/Acre	NUTRIENTS APPLIED Potassium, K_2O Lbs/Acre	- NUTRIENTS REMOVED Nitrogen, N Lbs/Acre	- NUTRIENTS REMOVED Phosphorous, P_2O_5 Lbs/Acre	- NUTRIENTS REMOVED Potassium, K_2O Lbs/Acre	= NUTRIENT BALANCE Nitrogen, N Lbs/Acre	= NUTRIENT BALANCE Phosphorous, P_2O_5 Lbs/Acre	= NUTRIENT BALANCE Potassium, K_2O Lbs/Acre
1	32.0	Alfalfa Hay	0	0	0	315	71	315	-315	-71	-315
2	46.0	Corn, Silage(AH)	96	80	163	216	112	257	-119	-32	-94
3	34.0	Corn, Grain	52	43	87	193	77	58	-141	-34	29
4	26.0	Wheat, Winter Soft White	68	56	114	130	69	31	-62	-12	83
0											
0											
0											
0											
0											
Off-Farm											

ANIMAL WASTE MANAGEMENT PLAN
MINIMUM REQUIRED ELEMENT

OPERATION AND MAINTANENCE

JD Milkyway Dairy
Name of Operation

Mark all that apply to your operation.

☐ Above and/or Below Ground Liquid Tank
The tank serves as a collection point for effluent to drain to or be scraped from the animal feeding areas. If the tank will provide storage capacity to the waste management system it shall be completely emptied at the beginning of the storage period and the contents applied to cropland as weather and crop conditions permit. A 1-foot free board will be maintained to prevent spillage. Continually maintain all pumps, agitators, piping valves and all other electrical and mechanical equipment in good operating condition by following manufacturer's recommendations. Float valves will be maintained in good working order. Perform daily inspections of waterlines including drinking water or cooling water lines. Repair leaking lines immediately to prevent excess water from entering the waste storage system. Depth markers are installed to assure maximum volume will be maintained and checked weekly. At least once every 5 years, the tank shall be emptied and inspected for structural damage and leakage. Any damage found shall be corrected before putting the tank back in service. Remove all foreign debris within the structure that may cause damage to pumps and agitator. If below ground, the tank lid will not be subjected to more than two, 8,000 pound wheel loads. Before entering a tank, for any reason whatever, proper ventilation shall be provided, and self-contained breathing apparatus shall be used, if required, when entering a covered tank. No one shall enter the tank unless safety ropes are used and someone else capable of providing assistance is outside of the tank. Warning: Entering Unventilated Tanks Is Extremely Dangerous.

☑ Animal Access Lanes or Walkways
Damaged components will be repaired or replaced as needed. Debris and excess manure will be removed from roadway surfaces, road ditch and drainage areas. Maintain drainage area capacities. Maintain good vegetative cover on all slopes and watercourses.

☐ Agitator
Preventative maintenance will be in accordance with the manufacturer's recommendations. Periodically examine the agitator for proper operation. Clean debris from the propeller and promptly replace any defective or damaged parts. Remove the agitator from the manure tank or pond and periodically clean and oil as needed to increase the life expectancy of the agitator. Immediately repair any vandalism or livestock damage. Do not allow livestock near the equipment during operation.

☑ Irrigation Water Management

Irrigation water application will be at rates that minimize transport of sediment, nutrients, and chemicals to surface water and ground water. Equipment modifications and/or soil amendments such as polyacrylamides and mulches should be considered to reduce erosion if needed.

☑ Manure Application Equipment

All manure application equipment (including but not limited to sprinklers, big gun irrigators, spreaders and/or tank wagons) will be operated and maintained according to the manufacturer's manual. Equipment found to be broken or worn will be replaced. Equipment will be calibrated to ensure recommended rates are applied. Liquids will be drained from sprinklers or big guns prior to freezing weather. When system is flushed, rinse water is used following waste, and liquid and sediment is applied agronomically. Nozzles will be checked periodically and if worn, nozzles will be replaced. Minimize exposure to animal and organic waters and manure gasses. Wear protective clothing when appropriate. When cleaning equipment after nutrient application, remove and save wastes in an appropriate manner. Avoid applying manure near surface water by establishing buffer strips and set backs, and use extreme care to avoid contaminating ground water.

☐ Manure Effluent and Irrigation Transfer Lines.

Manure, effluent and irrigation lines shall be flushed with clean water periodically to prevent particle buildup and plugging. Manure flushed from the lines will be applied agronomically so that surface and groundwater will be protected. Manure, effluent and irrigation lines shall be inspected periodically for leaks or worn out nozzles, and repairs or replacements made as needed. Special inspection shall be done to pressure relief valves, risers and control valves. Shut off valves will be inspected annually. Avoid unnecessary travel over pipelines that will damage their integrity. Equipment found to be broken or worn will be replaced. Water will be drained during cold weather to prevent frozen or broken lines. These lines can explode if not properly maintained and may cause human injury.

☐ Pumps

Pumps will be maintained in accordance with manufacturer's operation and maintenance manual. Effluent will be drained from pumps prior to freezing weather. Pumps will be inspected periodically to identify and remove debris wrapped around impeller or worn parts. Appropriate action will be taken to repair any worn parts. Liquids will be drained from pump prior to freezing weather to prevent breakage. It is recommended to have a spare pump or back up system in case a pump must be removed for an extended time for repair.

☑ Roofs

Roofs will be inspected annually. Rusted sections will be replaced or repaired if needed. Loose sections will be secured. All broken trusses, beams, poles, gutters and downspouts will be repaired or replaced.

☐ Solid Manure Separator

The separator should be inspected regularly for deterioration of protective coatings and repaired as necessary. All plumbing will be inspected annually and broken lines will be replaced or repaired. Loose connections will be tightened. If applicable, electric motors, pumps and gears should be routinely maintained. Separator will be operated and maintained according to manufacturer's manual.

☑ Concrete Gutters
Floor gutters and grates will be inspected periodically. All foreign material restricting flow will be removed. Damage will be repaired as needed.

☐ Curbs
Curbs, gutters and slabs that are used to convey effluent will be inspected periodically. Broken sections will be repaired or replaced. Manure or other solids will be prevented from building up next to curbs or flowing over them. If over flow is a consistent problem the curb height should be increased.

☐ Culverts
Inspect annually or after large rainfall event. All foreign objects restricting water flow will be removed. Damaged sections will be repaired or replaced. Erosion around inlet or outlet will be corrected.

☐ Dry Stack Storage Facility
Solid manure storage facility will be inspected annually. Broken slabs and curbs will be repaired. Repair or replace rusted or damaged areas on roof structure. Broken gutters and/or downspouts will be repaired or replaced. Check for adequacy and function of drain away from downspouts. Check side and back walls for soundness. Manure solids and leachate will not escape through cracks in the facility.

☑ Fencing
Fences will be inspected periodically. Broken or decayed posts will be replaced. Sagging wire will be tightened. Broken wire will be spliced or replaced. Broken or missing insulators for electric fencing will be replaced. Vegetation will be controlled under the fences. Electric fencing will be sufficiently charged to detour animals.

☐ Filter Strips
Maintain vigorous growth of vegetative covering. This includes reseeding, fertilization and application of herbicides when necessary. Periodic mowing, harvesting or grazing may also be needed to control height. Remove all foreign debris that hinders system operation. Limit the traffic from filter strip area. Limit livestock usage to vegetative growth periods when the animals will not damage vegetative root system or compact the soil. Eradicate or otherwise remove all rodents or burrowing animals. Immediately repair any damage.

☐ Gutters and Downspouts
Gutters will be inspected annually to ensure all gutters are free of foreign materials. Broken gutters or downspouts will be replaced or repaired. Gutters will be connected to downspouts. Leaky gutters and downspouts will be repaired. Weeds and sediment will be removed from downspout outlets. All downspouts will be connected to outlets, which are kept free flowing. Outlets will be inspected for rodent guards and repaired or replaced as needed.

☐ Subsurface Drainage System

Subsurface drainage will be inspected annually. Fields will be checked for breaks or suck holes. Outlets will be kept free of vegetation and sediment. Erosion at outlets will be corrected with riprap or other means. Damage or broken lines will be repaired. Outlets from fields on which animal waste is being applied will be monitored daily. Animal waste applications will cease if the tile outflow contains any indication of animal waste.

☑ Trough or Tank

Watering facility will be inspected periodically. Damaged tank/trough will be repaired or replaced. Float valves will be maintained in good working order. Area immediately surrounding the trough/tank will be maintained in a stable condition. Watering facility will be inspected periodically. Damaged tank/trough will be repaired or replaced. Float valves will be maintained in good working order. Area immediately surrounding the trough/tank will be maintained in a stable condition. Watering facilities will not be allowed to overflow if additional liquid will affect waste storage capacities.

☐ Waste Storage Pond

Prior to the storage season, empty the pond to provide storage capacity for the accumulation of wastewater and precipitation during the winter storage period. Sludge and accumulated solids will be removed from the pond periodically when buildup limits storage capacity in the pond. Depth markers are installed to assure maximum volume will be maintained and checked weekly. A 2-foot free board will be maintained to prevent spillage.

Maintain all pumps, agitators, pipeline, valves, and electrical and mechanical equipment in good operating condition following the manufacturer's recommendations. Immediately repair any vandalism, vehicular, or livestock damage to any earth fill. Immediately remove any obstructions or blockage of spillways, trash racks or pipe inlets. Settlement or cracks in earthen sections should be investigated to determine cause and immediately repaired. Maintain vigorous growth of vegetative coverings on the dikes to eliminate soil erosion. Eradicate or otherwise remove all rodents or burrowing animals and repair any damage caused by their activity. Fences and/or warning signs should be maintained as necessary to unauthorized human or livestock entry. Operate systems in a manner that minimizes odor and drift.

☐ _____

_____

_____

_____

_____

Signature of Legally Authorized Representative: Jeff DeLong

Print Name: Jeff DeLong Date: 6-10-05

ANIMAL WASTE MANAGEMENT PLAN
MINIMUM REQUIRED ELEMENT

ANIMAL MORTALITY

Management of Animal Mortalities for: **JD Milkyway Dairy**
Name of Operation

Animal mortalities will be disposed of in a manner that will comply with local, state, and federal regulations. Please mark and describe the method(s) of animal mortality management used on this operation:

☐ **REMOVAL SERVICE:** _____

☒ **COMPOSTED:** _____

☐ **INCINERATED:** _____

☐ **BURIED:** _____

☐ **OTHER:** _____

Signature of Legally Authorized Representative: Jeff DeLong

Print Name: Jeff DeLong Date: 6-10-05

RECORD KEEPING AND REPORTING

Soil samples will be taken in each field where manure is applied, once every 5 years and a manure sample will be taken yearly. Protocol for sampling and testing soil and manure is included in this Animal Waste Management Plan.

JD Milkyway Dairy records date and amount of manure exported. Also, records will be kept on all manure applications to crop ground. As a small State CAFO, the following will occur and records kept:

RECORD KEEPING:

a) Applications of manure, litter and process waste will be kept, including the date and amount of N and P applied during each application.
b) Records of exporting manure, litter and process waste will also be kept.

REPORTING TO OREGON DEPARTMENT OF AGRICULTURE (ODA):

a) Any discharge will be reported orally to ODA within 24 hours. Within 5 days, a written statement describing this discharge will also be submitted to ODA.
b) The amount of manure, litter or process waste applied will be reported annually.

JD Milkyway Dairy will report any discharge within 24 hours to the Oregon Department of Agriculture. Annual reports including amount of manure and wastewater applied and exported will be submitted each year.

ANIMAL WASTE MANAGEMENT PLAN
MINIMUM REQUIRED ELEMENT

RECORD KEEPING AND REPORTING TO OREGON DEPARTMENT OF AGRICULTURE

JD Milkyway Dairy
Name of Operation

RECORD KEEPING:

a) Applications of manure, litter and process waste will be kept, including the date and amount of N and P applied during each application.
b) Records of exporting manure, litter and process waste will also be kept.

REPORTING TO OREGON DEPARTMENT OF AGRICULTURE (ODA):

a) Any discharge will be reported orally to ODA within 24 hours. Within 5 days, a written statement describing this discharge will also be submitted to ODA.
b) The amount of manure, litter or process waste applied will be reported annually.
c) The amount of manure, litter or process waste exported will be reported annually.

Signature of Legally Authorized Representative: Jeff DeLong

Print Name: Jeff DeLong Date: 6-10-05

Crop Yields

Crop _____

Year _____

Field ID	Acres/Field	Yield	TOTAL	Date Submitted to ODA

Total Acres/Crop	

Total Yield/Year	

Manure Application Record Sheet

Field ID ______ **Nitrogen Requirement for Field** ______ lb/ac/y **Application Basis (Circle One)**

Year ______ **Phosphorus Requirement for Field** ______ lb/ac/y **Nitrogen** **Phosphorus**

Date Applied	Amount Applied	x	Nitrogen Content per Unit	=	Nitrogen Applied		Amount Applied x Phosphorus Content per Unit	=	Phosphorus Applied	Total N Applied	Total P Applied	Date Reported to ODA
		x		=				=				
		x		=				=				
		x		=				=				
		x		=				=				
		x		=				=				
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		x		=				=				

Additional:

Date Before Application	Weather Conditions	Date of Application	Weather Conditions	Date After Application	Weather Conditions	Date Reported to ODA

Manure Export Record Sheet

DATE EXPORTED	NAME	ADDRESS	AMOUNT (Tons, Yards, or Gallons	Date Reported to ODA