Horizon Organic Dairy

Nutrient Management Plan

November 29, 2012

Nutrient Management Plan Prepared For
Horizon Organic Dairy
Paul, Idaho

Certified Planner:
Marsha Neibling, Neibling Environmental Consulting
(208) 423-4942

Producer
Signature:

Certified Planner
Signature:

The information provided by those using the "idaho oneplan" shall be deemed to be trade secrets, production records, or other proprietary information and shall be kept confidential and shall be exempt from enclosure pursuant to section 9-340d, Idaho code. (title 22 chapter 27.17d6)

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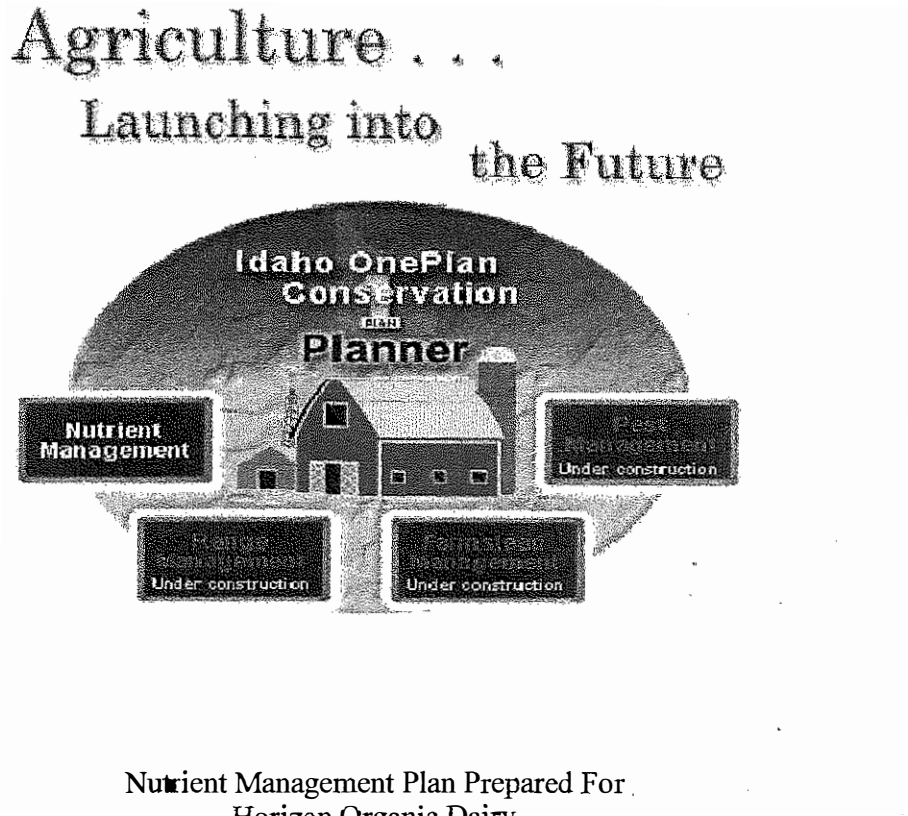
August 6, 2012



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Producer Signature: Horizon Organic Dairy by Jamie M. Kalasa

Certified Planner Signature: Marsha Neibling

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Producer Summary

Dairy Information

Facility Name Facility Address	Horizon Organic Dairy, LLC 2577 East 500 South Paul, Idaho 83347	Township 9 South, Range 21 East, Sections 16, 17, 18, 20, 21, 22, 27, 28, 29, 32, 33, 34 Township 9 South, Range 20 East, Sections 1, 7, 12, 13, 14	
Operator Information Mailing Address	Jamie Kulesa 2577 East 500 South Paul, Idaho 83347	Office Phone Cell Phone	208-438-8450 Jamie: 208-650-0794
Manager Information Manager Address	Jamie Kulesa 2577 East 500 South Paul, Idaho 83347	Office Phone Cell Phone	208-438-8450 Jamie:208-650-0794
County	Jerome		
GPS	42 38 ‘ 55” N 114 00’ 44” W		

RESOURCE CONCERNS:

Resource Concern	Surface and Groundwater
Soil Conservation District	Northside
Watershed Basin	Upper Snake
Hydrologic Unit Code	17040212
Stream Segment	Snake River

ANIMAL CLASS

Location of Animals	Description	Animal	Number	Average Animal Weight	Days Collected	Housing	Bedding Type	Bedding (tons)	Waste (tons)
East Dairy Freestall Barns	Milkers	Lactating Cow	2400	1,400	202	Freestall	Compost	1,087	28,864
East Dairy Exercise Pens	Milkers	Lactating Cow	2400	1,400	87	Open Lot	None	0	12,370
East Dairy Pastures	Milkers	Lactating Cow	2400	1,400	76	Pasture	None	0	10,851
West Dairy Open Lots	Dry Cows	Dry Cow	200	1,400	213.5	Open Lot	Chopped Straw	329	2,584
	1000 # Heifers	Dairy Heifer	700	1,000	212.7	Open Lot	Chopped Straw	819	6,671
	900# heifers	Dairy Heifer	400	900	212.6	Open Lot	Chopped Straw	421	3,429
	550# Heifers	Dairy Heifer	400	550	212.6	Open Lot	Chopped Straw	257	2,095
West Dairy Pastures	Dry Cows	Dry Cow	200	1,400	151.5	Pasture	None	0	1,833
	1000# Heifers	Dairy Heifer	700	1,000	152.3	Pasture	None	0	4,775
	900# Heifers	Dairy Heifer	400	900	152.4	Pasture	None	0	2,458
	550# Heifers	Dairy Heifer	400	550	152.4	Pasture	None	0	1,502
Dry Cow Facility Open Lots	Maternity Cows	Dry Cow	100	1,400	273.8	Open Lot	Chopped Straw	211	1,657
	Maternity Heifers	Dry Cow	100	1,400	273.8	Open Lot	Chopped Straw	211	1,657
	Calves	Dairy	400	250	365	Open	Chopped	201	1,635

		Calf				Lot	Straw		
Dry Cow Facility Pastures	Maternity Heifers Pasture	Dry Cow	100	1,400	91.2	Pasture	None	0	552
	Maternity Cows	Dry Cow	100	1,400	91.2	Pasture	None	0	552

Total Animal Units on Facility	5,300
Total Acres Available for Nutrients Owned by the Facility	8,085.21
Total Acres Available for 3rd Party Export	0 (none are needed)

NUTRIENT DISTRIBUTION ON FACILITY

	Pounds N	Pounds P_2O_5	Pounds K_2O	% of Total	Weight (in Tons)
Total Nutrients Produced	269,316	265,902	586,551	100	---
Pasture(s)	24,179	58,813	138,496	22	21,267
Compost	49,438 PAN 1st yr based on compost analysis	187,823	408,709	70.6	13,070
East Dairy Lagoon Water	13,038	17,678	34,581	6.6	5,078
West Dairy Lagoon Water	1,390	1,588	4,765	0.6	739
Nutrients Onsite	269,316	265,902	586,551	100	
Nutrients Exported	0	0	0		

MANURE STORAGE SUMMARY

Total Annual Liquid Capacity Required				
Bio-Nutrient Group	Recommended Capacity Cubic Feet	% Contained	Storage Days	Storage Vol. Cubic Feet
AnimalWaste to Storage Ponds Then To Land Application Through Sprinklers or Injection	East Dairy Facility West Dairy Facility	100	180	163,816 11,216
Runoff to Storage Ponds Then To Land Application Through Sprinklers or Injection	East Dairy West Dairy (Including Feed Storage Areas 2-3)	100	180	621,252 746,822
Runoff Storage Then to Evaporation (This runoff is not included in the volume to be land applied)	West Dairy Feed Storage Area 1 Dry Cow Facility Heifer North Facility Heifer South Facility Feed Storage Area 4 Feed Storage Area 5			390,104 388,938 549,240 156,449 119,603 74,589

	North Compost Area* South Compost Area*			695,200 1,647,150
Process Water to Storage Ponds Then To Land Application Through Sprinklers or by Injection,	East Dairy 5,110,000	100	180	East Dairy 2,555,000
East Dairy Facility Total Liquid Storage Required (This will be land applied)		100	180	+2,555,000+621,252+ 163,816 = ***3,340,068***
West Dairy Facility Total Liquid Storage Required (This will be land applied)		100	180	1,136,926 + 11,216 = ***1,148,142***

*The storage volume for both compost areas was calculated based on a 100 yr-24 hr storm, to ensure no runoff.

Total Annual Solid Capacity Required		
Bio-Nutrient Group	Recommended Capacity Cubic Feet	% Contained
Manure Composted in Compost Facilities, Volume as Fresh Manure		
Compost	920,654	100%
1000 # Heifers OL	119,127	100%
550# Heifers OL	37,382	100%
900# heifers OL	61,236	100%
Milkers-freestall	135,875	100%
Maternity Heifers OL	30,691	100%

Dry Cows OL	47,855	100%
Maternity Cows OL	30,691	100%
Dry Cow Facility Calves	29,236	100%
Manure Dropped as Cows/Heifers Graze		
Pasture(s)	686,046	0%

EXISTING LIQUID AND SOLID MANURE STORAGE CONTAINERS

Destination	Container Name	Volume (ft3)	Storage Period (Days)	Length	Width	Depth	Slope	Diameter	Existing	Proposed
Liquid is Land Applied	East Dairy Lagoon	3,478,722.0	180	1,518.0	384.0	7.5	3.0	0.0	Yes	No
	East Dairy Settling Basin 1	34,626.0	180	344.0	50.0	4.0	3.0	0.0	Yes	No
	East Dairy Settling Basin 2	34,626.0	180	344.0	50.0	4.0	3.0	0.0	Yes	No
	West Dairy Pond 1	1,555,713.0	180	750.0	190.0	13.1	2.0	0.0	Yes	No
	West Dairy Pond 2	631,881.0	180	685.0	131.0	8.2	2.0	0.0	Yes	No
	West Dairy Pond 3	1,219,941.0	180	490.0	260.0	10.9	2.0	0.0	Yes	No
	West Dairy Pond 4	847,155	180	735.0	175.0	8.6	2.0	0.0	Yes	No

Compost is Land Applied	North Compost Area	1,920,000.0	180	4,000.0	40.0	12.0		0.0	Yes	No
	South Compost Area	2,160,000.0	180	30,000.0	12.0	12.0		0.0	Yes	No
Liquid Evaporates	Dry Cow Facility Runoff Storage	400,000	180	1,000.0	400.0	1.0		0.0	Yes	No
	Heifer North Runoff Storage	570,000.0	180	2,300	113	2.2		0.0	Yes	No
	Heifer South Runoff Storage	180,000.0	180	661	54.5	5		0.0	Yes	No
Liquid is Land Applied From the West Dairy Ponds	Feed Storage Area 1 Runoff Storage	390,104	180	Flows to WD Pond 4						
	Feed Storage Area 2 Runoff Storage	205,563	180	Flows to WD Pond 1						
	Feed Storage Area 3 Runoff Storage	90,757	180	Pumped and Trucked to WD Ponds 1, 2, 3, or 4						
Liquid Evaporates	Feed Storage Area 4	119,603	180	789.00	100.00	1.6	These berms will be built up according to the results of the recent hydrologic analyses. This			

	Runoff Storage						construction will be completed by December 31, 2013.
	Feed Storage Area 5 Runoff Storage	74,589	180	320	100	2.4	
	North Compost Area Runoff Storage	695,200	180	1,600	100	4	
	South Compost Area Runoff Storage	1,647,150	180	3,526	100	2.4	

THIRD PARTY EXPORT

None

PLANNER INFORMATION

Planner Name	Marsha Neibling
Planner Address	3265 E 3500 N Kimberly, Idaho 83341
Planner Phone Number	
Office	208-423-4942
Cell	208-969-0508
Fax	1-866-856-7096
Planner Certification Number	1025

FACILITY SUMMARY

FACILITIES

The Horizon Organic Dairy operation near Paul, Idaho encompasses the East Dairy facility (new freestall/pasture dairy), the West Dairy facility, the the Dry Cow facility south of the railroad tracks, the North Heifer Lots, the South Heifer Lots, Feed Storage Areas 1 to 4, the North and South Compost Areas, and Shop 1, along with 8,266 acres of land in eastern Jerome County, Idaho. The East Dairy facility houses 2,400 milking cows. The West Dairy facility houses 400 heifers with an average weight of 550 pounds, 400 heifers with an average weight of 900 pounds, 700 heifers with an average weight of 1,000 pounds, and 200 dry cows with an average weight of 1,400 pounds. No cows are currently being milked at the West Dairy facility. The Dry Cow facility houses 100 maternity cows (1,400 pounds), 100 maternity heifers (1,400 pounds), and 400 calves with an average weight of 250 pounds. The two heifer facilities are not currently used, but may be used for housing heifers periodically. The farmland included in this plan is either owned or leased and operated by Horizon Organic Dairy. All berming or other construction proposed in this plan will be completed by December 31, 2013.

MANURE HANDLING

All manure is composted in the north or south compost areas. Fresh manure is transported by manure truck from where it is produced to these areas. The compost is turned mechanically on a regular basis for about ten weeks. This results in a reduction in volume of fifty to sixty percent. Finished compost is stored at the compost areas until it is land applied in the fall, winter, or spring. Regular application of compost improves water infiltration capacity of soils by increasing soil organic matter.

Crop uptake rates for phosphorus were used to determine maximum compost application rates for each field. The land base is more than is needed to apply all of the compost at crop uptake rates and even at the reduced application rates discussed below. This said, some fields have phosphorus levels above the 40 ppm threshold; we are working to reduce these levels.. Some fields have very low phosphorus levels. By adjusting application rates lower on those fields with high levels, more compost will go to the fields with low phosphorus levels. The maximum application rates for each field are listed in this plan. The compost application rates also consider mineralization rates. Temperature, precipitation, manure nitrogen content, and other factors determine the rate of mineralization. The application rates will be reduced for fields on which the 0-12" phosphorus is greater than 40 ppm. For fields with levels from 40 to <80, rates will be reduced by 25%. Where the levels were greater than 80 ppm, the rates will be reduced by 50%. Even with these reductions, there will be insufficient compost to fulfill these rates on every field. The nitrogen need will be calculated in the Annual Budget each year in the spring based on soil tests. Additional nitrogen will be provided as needed by using fish fertilizer or a similar organic nitrogen source. It is recommended that petiole sampling also be done to ensure adequate nitrogen to the crop. The nutrient content of the lagoon effluent and composted manure will be sampled and tested once a year prior to land application. These samples will be tested for TKN, TP, NO3-N, NH4-N, K, Cu, dry matter content or total solids, pH, and EC. The

compost/wastewater sampling methods will be those described in the UI guidance document, "Manure and Wastewater Sampling" (CIS 1139). Lagoon samples will be taken from the East Dairy Lagoon only, since there are no milking cows at the West Dairy. One pint of liquid will be taken from at least eight sites around the lagoon using a long pole with a plastic cup on the end. Samples will be taken at least six feet from the pond edge at a depth of about a foot. Floating debris or scum will be avoided. These subsamples will be combined in a plastic bucket and mixed well; a subsample will be placed in a sealed, clean plastic container with a 1-quart volume and taken to the Lab for analysis.

EQUIPMENT MAINTENANCE

Equipment maintenance is done at Shop 1. All used oil is collected and sent for recycling. Floor drains flow to a containment basin south of this shop. At Feed Storage Area 5, calf milk is prepared. Clean-up water from calf feeding flows to a buried tank north of the barn. From there, it is pumped out through handlines to the dry southeast corner of Field 110.

FARMLAND

Farmland uses on this facility include pivot, handline, or wheelline irrigated cropland and pasture, and dry pasture. There is no surface irrigation on this facility. The cropland crop rotation includes corn silage, barley, and alfalfa, with winter cover crops grown after barley. Many fields are in permanent pasture. In the fall, after barley, a field is harrowed, air-seeded with clover, roller harrowed, and watered. Volunteer barley comes up along with the clover. Cows are pastured on the barley for a few days to graze it down. The clover grows over the winter and is turned under in the spring as a green manure crop, This provides winter cover to help prevent loss of nutrients from the soil. Clover will fix nitrogen and increase the nitrogen in the soil, which will show up in the spring soil tests. In the fall after corn, a field is ripped to create a rough surface to which compost will be applied, and which will absorb winter runoff well. In the spring, the field is planted to barley. Alternative winter crops include red clover, mustard, triticale; spring crops include peas. The alternative crop rotation has a slightly higher phosphorus uptake rate. When these alternative crops are grown, the application rates will be the same as for the standard rotation. An Annual Budget will determine nitrogen needs.

Fields receiving East Dary lagoon water include 500-507, 432p, and 433. Water will be applied through the pivots evenly over the crop growing season, mixed with clean water to keep odors down.

Fields receiving compost are listed in the Application table. In addition to compost, other additions of plant-available nitrogen and phosphorus include fish emulsion (12%N), chicken manure (12%N), and bile builders (4%N). Compost is applied in the fall, winter, and spring. When the ground is not frozen, incorporation will be done within one week. Otherwise, it will be done in the spring. Winter cover crops or chiseling the fields to create a rough surface are used to mitigate winter land application on cropland. Aerway aeration is utilized on pastures to create more surface area and help prevent runoff. In the Risk Analysis Appendix B, fields are listed on which compost will only be applied if it can be

incorporated within three days. This will help reduce the risk of runoff into drainageways that could potentially flow into waters of the US.

The A&B Irrigation District "Main Drain" ditch is the only route for drain water from dairy fields to reach the Northside Canal, then the Snake River. Visual observation of the lower end of this drainage path (high desert land), where it enters the Northside Canal, shows no signs of water flow. Even with this low apparent risk, fields adjacent to and draining into this ditch or a ditch draining into it, receive special care to prevent runoff of nutrients into this drainageway. These fields include pastures 140, 145, 155, 405, 420, 421, 422p, 422dc, 423-424, 432dc, 501, 502, 601, and cropland 150, 402c, 433, 701. No compost will be applied to 422dc or 432dc, since these are dry corners. Thirty-five foot vegetated buffers, where no compost will be applied, will be utilized as detailed in the Risk Assessment Appendix B, where all risk mitigation details are listed for each field. All pastures adjacent to this drain receiving liquid waste or compost will have a 35' vegetated buffer. On pasture fields, an Aerway aerator will be used in the fall or spring after compost application to incorporate compost, break up surface compaction and enhance infiltration. The pasture fields are also harrowed regularly as part of ongoing maintenance after each prescribed grazing. Both the North and South Heifer Lots drain toward the Main Drain. There is berming in place to prevent heifer lot runoff from entering the Main Drain, and it will be built up for further protection. Berming to prevent run-on to the North Heifer Lots will also be completed. This work will be completed by December 31, 2013. These heifer lots are not currently used, but are available if needed.

Soil test data taken from the 0-12" zone in the fall of 2011 was used in the development of this plan. This data was taken using grid sampling on a five acre grid. It is the intent of the dairy management to begin applying compost and fish emulsion at varying rates across a field based on these grid samples, as the equipment is available. For NMP development, the average phosphorus levels for each field were used. In the fall of 2012, 0-12" and 12-24" composite samples are being taken for NPDES permit compliance. Soil on all fields will be sampled and tested once a year. The UI guidance document, "Soil Sampling (CIS 704), will be used as a guide. Irrigated fields will be grid sampled on a 5 acre grid. These fields have been grid sampled each year starting in the Fall of 2009. This has and will continue to provide a great deal of information regarding variability of nutrients within each field. Grid-based application of nutrients is planned as soon as it is feasible. Non-irrigated fields are sampled using CIS 704, with no grid sampling.

WEST DAIRY FACILITY, NORTH AND SOUTH HEIFER LOTS, DRY COW LOTS

The *West Dairy Facility* heifers and dry cows are housed in open lots seven months of the year, and on pasture 5 months of the year. When in open lots, the bedding is straw.

Dry Cow Facility calves are housed in open lots. *Dry Cow Facility* maternity cows and heifers are on pasture 5-6 hrs/day, with the remaining time in open lots, bedded with straw. Fields listed as pastures in the Land Application information below are used for grazing cows.

Fields 102, 103, 104, 113, 114, 131, 132, 133, 140, 145, 153, 154, 155, 400, 401, 405, 420, 421, 422, 423, 424, 425, 432, 433, 434, 435, 450, 451, 452, 601, 115, 116, 117, 118, 119, 120, and the desert around 400 and 401, are being used for heifers and dry cows for grazing. The nutrients applied to these fields as the animals graze are shown under pasture nutrients applied

West Dairy surface runoff flow patterns for each lot are shown in the site plan. All dairy runoff except that from the corral east of the canal flows by gravity to the lagoon system. The corral east of the canal drains south into a runoff collection area, which overflows into the pond system. West Dairy runoff water can be pumped from any of the West Dairy ponds to nearby fields for irrigation.

The ***Dry Cow Facility*** has existing berming to prevent runoff from leaving the runoff collection areas south of the lots, west of 114, and east of 113. The runoff from the dry cow area is contained with berms. All of this runoff evaporates.

The ***South Heifer Lots*** drain to the west into a runoff collection channel. The water in this channel is lost to evaporation, but could be land applied to nearby pasture ground through a pivot. The ***North Heifer Lots*** drain to the south. Runoff is contained by berms and is lost to evaporation.

West Dairy Facility, Heifer Lots, and Dry Cow Lot solid manure is composted in either the North or South bermed Compost Area, shown on the Land Application Map. Compost will be applied to the fields.

EAST DAIRY FACILITY

East Dairy Facility milking cows are housed in freestall barns with access to exercise pens and pastures. The dairy facility is situated in the center of eight approximately 60 acre pastures (500-pastures 500-507). There are eight pens, plus a hospital pen, with a total of 2,400 milking cows with an average weight of 1,400 pounds. Each of the eight pens has access to an outside lot and a sixty-acre pasture. The milk parlor is a 72 stall rotary. The milk parlor is cleaned by spraying it down. The holding pen is flushed with clean water. Barn wastewater and facility runoff flow to a reception pit, from which it is pumped to a slope screen separator, then gravity flows into one of two settling basins, followed by the large lagoon. Water from this lagoon will be land applied to the dairy pastures (500-507), and to fields 432, and 433 thru the irrigation systems. The freestall barns are vacuumed two to three times a day. The vacuumed manure is spread to dry, then composted in either the North or South Compost area located south the West Dairy Facility and south of Pivot 142. Composted manure will be land applied on the fields.

LAGOONS, SETTLING BASINS, BERMS, RUNOFF COLLECTION BASINS, AND VEGETATED BUFFER CONSTRUCTION AND MAINTENANCE

East Dairy Lagoon maintenance begins with pumping the lagoon water out through pivots over the growing season. In the fall, a drag line or extended reach excavator is used to remove solids from the bottom of the lagoon. These solids are then spread on the compost piles. In November, sludge is pumped from the lagoon bottom through a moveable hose, then is injected twelve inches deep using a tractor with a drag hose on fields within 1.5 miles of the East Dairy. This is considered to be a part of the total compost applied to these fields in this plan.

The Settling Basins adjacent to the ED Lagoon are pumped in the spring and again in the fall. Sludge is pumped through a moveable hose, then is injected twelve inches deep using a tractor with a drag hose on fields within 1.5 miles of the East Dairy. Two to three more times during the year, sludge is removed from the settling basins with a scoop, transported in a truck, then spread on the compost rows. Solids from the solid separator are taken to the compost rows.

All berms will be constructed according to NRCS guidelines. They will be inspected at a minimum in the spring and fall. When needed, they will be rebuilt to the original standards.

Runoff collection areas will be inspected and repaired at a minimum of twice a year in the spring and fall. In addition, the ditch carrying potential runoff water from field 145 will be maintained to carry any flow to West Dairy Pond 1. The inlet to the pipe carrying irrigation drainage through the East Dairy area will be checked monthly for debris or obstruction and cleaned as needed.

Vegetated buffers will consist of a 35' strip of permanent well-maintained grass designed to filter any nutrients that may flow into it. Please see Appendix B for further information on Conservation Practices to prevent runoff.

RESOURCE CONCERNS

Horizon Organic Dairy is located in the hydrologic unit code 17040212 in the Upper Snake within the Snake River stream segment. The pollutants of concern in this stream segment are bacteria, dissolved oxygen, sediment, temperature, and flow alteration. The East Dairy Facility is located at 42 40 ' 30.22" N 113 58' 42.76" W using GPS coordinates.

The Main Drain that runs along the east side of the West Dairy Facility flowing to the south, drains under a flume in the Milner-Gooding Canal, then continues to the southwest. With sufficient flow, it could be possible for water to reach the Northside Canal, a small portion of which returns to the Snake River. Great care will be taken to prevent manure nutrients from flowing into this drain ditch at any point near dairy land. Hydrologic analysis of the watershed feeding this drain ditch shows that it is undersized to carry the required flow adjacent to the West Dairy. New berming will be constructed on the west side of Field 140 to carry this flow.

The dairy fields are irrigated with well water. Wells are shown on the HOD Wells Map. The Milner-Gooding Canal drains back into the Snake River.

The primary resource concern on the Horizon Organic Dairy is ground water quality, due to sprinkler irrigation which greatly reduces the risk of surface water quality degredation. Please see the Irrigation Water Management Plan in Appendix I of this document for further information. The soil is a silt loam. Groundwater is located at approximately 240 to 320 feet.

Fields have been analyzed for runoff risk, and conservation practices have been determined for each field. Field 114 does have some runoff due to steep slopes. This runoff flows to a low area of the pasture, then under Crestview Road through a pipe into a bermed runoff collection area just west of the road. This runoff will be lost to evaporation.

MANURE APPLICATION RATE REQUIREMENT

This NMP has been developed using the Narrative Rate Approach. The crop rotations listed will be used, but the order of the crops from year to year may change. Alternative crops may be grown. The crop rotations and alternative crops are detailed on pages 167-170.

Timing and method of nutrient application shall correspond as closely as possible with plant nutrient uptake timing, while considering cropping system limitations, weather and climatic conditions, risk analysis and field accessibility. Application methods to reduce the risk of nutrient transport to surface and ground water or into the atmosphere shall be employed.

Compost application rates will be reduced on fields with a phosphorus level greater than 40 ppm in the 0-12" zone. Application rates on fields with a phosphorus level less than 40 ppm are set at the average crop uptake rate of phosphorus for the crop rotation. Crop rotations are detailed on pages 167-170. For fields with levels between 40 and 80 ppm, the application rate will be reduced to 75% of the crop uptake rate. For fields with levels 80 ppm or higher, the application rates will be reduced to 50% of the crop uptake rate. The following application rates are set at the crop uptake rate, so that each year the actual application rate can be determined by the soil test phosphorus level as discussed above. Ideally, fields with high phosphorus levels would have no compost applied some years until the levels come down.

APPLICATION RATES LISTED BY CROP ROTATION AND FORM OF MANURE APPLIED

Fields Using Rotation 1 and Rotation 1 Corners With Only Compost Applied

100 127.9 acres
101 124.45 acres
105 20.95 acres
106 11.28 acres
200 125.43 acres
200c 32.92 acres
201 121.61 acres
201c 28.5 acres
202 125.62 acres
202c 32.72 acres
203 60.49 acres
203c 14.38 acres
204 64.1 acres
204c 22.46 acres
205 145.71 acres
206 13.5 acres
206c 36.99 acres
207 77.96 acres
210hl 60.51 acres
210p 60.28 acres
211 90.81 acres
300 129.49 acres
301 106.99 acres
302a 15.39 acres
303a 17.23 acres
304 108.04 acres
305 104.15 acres
306 117.15 acres
307 67.39 acres
308 57.76 acres
309 21.41 acres
400 130.29 acres
401 40.78 acres
402p 97.61 acres
402c 73.1 acres
404 62.44 acres
430 158.22 acres
431 107.24 acres
440 57.5 acres
441 123.45 acres
442 24.88 acres
443 100.25 acres
444 85.04 acres
700 65.71 acres
701 26.08 acres
702 20.31 acres
703 21.84 acres

Name	Man App		Compost	Mineralization		Total	
Rotation 1 and Rotation 1 Corners Application Rate based on P crop uptake	Y		3.7 T/ac				
		N	14	N	15	N	29
		P	55			P	55
		K	120			K	120

Fields Using Rotation 1 and Rotation 1 Corners With Compost and West Dairy Runoff Water Applied

107 95.99 acres
108 74.34 acres
109 62.27 acres
110 61.3 acres
111 18.71 acres
112 10.34 acres
130 127.86 acres
134 12.51 acres
141 54.47 acres
142 46.37 acres
143 6.59 acres
144 89.7 acres
150p 128.4 acres
150c 14.32 acres
152 74.14 acres

Name	Man App		Compost	WD Runoff Water	Mineralization		Total	
			3.6 T/ac	0.26 inches				
Rotation 1 and Rotation 1 Corners Application Rate based on P crop uptake	Y	N	14	1.2	N	15	N	30
		P	53.7	1.3			P	55
		K	117	4.0			K	121

Fields in Permanent Irrigated Pasture With Pasture Manure and Compost Applied

102 31.63 acres
103 31.39 acres
104 62.7 acres
113p 37.15 acres
114 12.83 acres
405 37.63 acres
420 79.86 acres
421 129.42 acres
422 135.39 acres
423 133.39 acres
434 22.06 acres
435 18.67 acres
450 118.47 acres
451 83.76 acres
452 61.62 acres
601 53.99 acres

Name	Man App		Compost	Pasturing Cows Manure	Mineralization			Total
Irrigated Pasture Application Rate for fields with soil test P <40 ppm & with pasture & compost nutrients applied	Y		4.3 T/ac	8.4 t/ac				
		N	14	4	N	15	N	33
		P	65	24			P	89
		K	136	57			K	193

Fields in Permanent Irrigated Pasture with Pasture Manure, East Dairy Lagoon Water, and Compost Applied

432 67.01 acres
433 15.73 acres
500 56.91 acres
501 62.09 acres
502 60.36 acres
503 58.15 acres
504 61.09 acres
505 61.92 acres
506 48.4 acres
507 74.68 acres

Name	Man App		Compost	Pasturing Cows Manure	East Dairy Lagoon Water	Mineralization		Total	
Irrigated Pasture	Y		2.2 T/ac	8.4 t/ac	1.6 inches				
Application Rate for fields with soil test P <40 ppm & with pasture, compost, and lagoon water nutrients applied		N	2	4	10	N	15	N	31
		P	33	24	31			P	88
		K	68	57	56			K	181

Fields in Permanent Irrigated Pasture with Pasture Manure, West Dairy Runoff Water, and Compost Applied

131 120.6 acres
132 26 acres
133 36.79 acres
140 93.05 acres
145 55.36 acres
153 77.6 acres
154 29.18 acres
155 24.46 acres

Name	Man App		Compost	Pasturing Cows Manure	West Dairy Runoff Water	Mineralization		Total	
Irrigated Pasture	Y		4.2 T/ac	8.4 t/ac	0.26 inches				
Application Rate for fields with soil test P <40 ppm & with pasture, compost, and lagoon water nutrients applied		N	4	4	1.2	N	15	N	24
		P	63	24	1.3			P	88
		K	130	57	4.0			K	191

Fields in Permanent Dry Pasture With Pasture Manure Only Applied

113 dry 148.6 acres
115 174.13 acres
116 470.43 acres
117 357.7 acres
118 186.2 acres
119 94.97 acres
422dry 107.44
432dry 27 acres
440-444 dry corners 85 ac.
400-401 dry corners 70.83 ac.

Name	Man App		Pasturing Cows Manure	Mineralization			Total
Dryland Pasture	Y		2.2 t/ac				
Application Rate for fields with soil test P <40 ppm		N	1	N		N	1
		P	6			P	6
& with pasture nutrients applied		K	15			K	15

APPLICATION RATES LISTED BY CROP ROTATION, FORM OF MANURE APPLIED, AND SOIL TEST PHOSPHORUS

Fields using Rotation 1 and Rotation 1 Corners with 2011/2012 0-12" Soil Test P less than 40 (Only Compost Applied)

(Compost will be applied at 100% of the crop uptake rate)

100 127.9 acres
200 125.43 acres
200c 32.92 acres
201 121.61 acres
201c 28.5 acres
202 125.62 acres
202c 32.72 acres
203 60.49 acres
203c 14.38 acres
204 64.1 acres
204c 22.46 acres
205 145.71 acres
206 13.5 acres
206c 36.99 acres
207 77.96 acres
210hl 60.51 acres
210p 60.28 acres
211 90.81 acres
300 129.49 acres
302a 15.39 acres
303a 17.23 acres
306 117.15 acres
309 21.41 acres
400 130.29 acres
401 40.78 acres
402c 73.1 acres
402p 97.61 acres
404 62.44 acres
430 158.22 acres
431 107.24 acres
440 57.5 acres
442 24.88 acres
443 100.25 acres
444 85.04 acres
700 65.71 acres
701 26.08 acres
702 20.31 acres
703 21.84 acres

Name	Man App		Compost	Mineralization		Total	
Rotation 1 and Rotation 1 Corners	Y		3.7 T/ac				
Application Rate based on P crop uptake		N	14	N	15	N	29
		P	55			P	55
		K	120			K	120

Fields using Rotation 1 and Rotation 1 Corners with 2011/2012 0-12" Soil Test P 40 to <80 (Only Compost Applied)

(Compost will be applied at 75% of the crop uptake rate)

101 124.45 acres 301 106.99 acres 308 57.76 acres

105 20.95 acres 304 108.04 acres

106 11.28 acres 305 104.15 acres

Name	Man App		Compost	Mineralization		Total	
Rotation 1 and Rotation 1 Corners	Y		2.8 T/ac				
		N	3.5	N	15	N	18.5
Application Rate based on P crop uptake		P	42			P	42
		K	90			K	90

Fields using Rotation 1 and Rotation 1 Corners with 2011/2012 0-12" Soil Test P >80 (Only Compost Applied)

(Compost will be applied at 50% of the crop uptake rate)

307 67.39 acres 441 123.45 acres

Name	Man App		Compost	Mineralization		Total	
Rotation 1 and Rotation 1 Corners	Y		1.85 T/ac				
		N	7	N	15	N	22
Application Rate based on P crop uptake		P	27.5			P	27.5
		K	60			K	60

Fields Using Rotation 1 and Rotation 1 Corners with 2011/2012 0-12" Soil Test P less than 40ppm (Compost and West Dairy Runoff Water Applied)

109 62.27 acres 150p 128.4 acres

Name	Man App		Compost	WD Runoff Water	Mineralization		Total	
Rotation 1 and Rotation 1 Corners	Y		3.6 T/ac	0.26 inches				
		N	14	1.2	N	15	N	30
Application Rate based on P crop uptake		P	53.7	1.3			P	55
		K	117	4.0			K	121

Fields Using Rotation 1 and Rotation 1 Corners with 2011/2012 0-12" Soil Test P 40 to <80ppm (Compost and West Dairy Runoff Water Applied)

107 95.99 acres 111 18.71 acres 143 6.59 acres
110 61.3 acres 112 10.34 acres 150c 14.32 acres

Name	Man App		Compost	WD Runoff Water	Mineralization		Total	
Rotation 1 and Rotation 1 Corners	Y		3.6 T/ac	0.26 inches				
		N	14	1.2	N	15	N	30
Application Rate based on P crop uptake		P	53.7	1.3			P	55
		K	117	4.0			K	121

Fields Using Rotation 1 and Rotation 1 Corners with 2011/2012 0-12" Soil Test P >80ppm
(Compost and West Dairy Runoff Water Applied)

108 74.34 acres 141 54.47 acres 152 74.14 acres
130 127.86 acres 142 46.37 acres
134 12.51 acres 144 89.7 acres

Name	Man App		Compost	WD Runoff Water	Mineralization		Total	
Rotation 1 and Rotation 1 Corners	Y		3.6 T/ac	0.26 inches				
		N	14	1.2	N	15	N	30
Application Rate based on P crop uptake		P	53.7	1.3			P	55
		K	117	4.0			K	121

Fields in Permanent Irrigated Pasture With 2011/2012 0-12" Soil Test P <40 ppm Pasture Manure and Compost Are Applied
(Compost will be applied at 100% of the crop uptake rate)

102 31.63 acres 405 37.63 acres 451 83.76 acres
104 62.7 acres 434 22.06 acres 452 61.62 acres
113p 37.15 acres 435 18.67 acres
114 12.83 acres 450 118.47 acres

Name	Man App		Compost	Pasturing Cows Manure	Mineralization			Total
Irrigated Pasture	Y		4.3 T/ac	8.4 t/ac				
		N	14	4	N	15	N	33
Application Rate for fields with soil test P <40 ppm		P	65	24			P	89
& with pasture & compost nutrients applied		K	136	57			K	193

Fields in Permanent Irrigated Pasture with 2011/2012 0-12" Soil Test P >40 and <80 ppm Pasture Manure and Compost Applied

(Compost will be applied at 75% of the crop uptake rate)

103 31.39 acres 421 129.42 acres 423 133.39 acres

420 79.86 acres 422 135.39 acres

Name	Man App		Compost	Pasturing Cows Manure	Mineralization			Total
Irrigated Pasture	Y		3.2 T/ac	8.4 t/ac				
Application Rate for fields with soil test P>40 and <80 ppm		N	9.5	4	N	15	N	28.5
		P	46	24			P	70
& with pasture & compost nutrients applied		K	102	57			K	159

Fields in Permanent Irrigated Pasture with 2011/2012 0-12" Soil Test P>80 ppm Pasture Manure and Compost *Applied* *(Compost will be applied at 50% of the crop uptake rate)*

601 53.99 acres

Name	Man App		Compost	Pasturing Cows Manure	Mineralization			Total
Irrigated Pasture	Y		2.15 T/ac	8.4 t/ac				
Application Rate for fields with soil test P >80 ppm		N	7	4	N	15	N	26
		P	32	24			P	56
& with pasture & compost nutrients applied		K	68	57			K	125

Fields in Permanent Irrigated Pasture with Pasture Manure, East Dairy Lagoon Water, and Compost Applied With 2011/2012 0-12" Soil Test P <40 ppm
(Compost will be applied at 100% of the crop uptake rate)

432 67.01 acres
433 15.73 acres
501 62.09 acres
504 61.09 acres
505 61.92 acres
506 48.4 acres
507 74.68 acres

Name	Man App		Compost	Pasturing Cows Manure	East Dairy Lagoon Water	Mineralization		Total	
Irrigated Pasture Application Rate for fields with soil test P <40 ppm & with pasture, compost, and lagoon water nutrients applied	Y		2.2 T/ac	8.4 t/ac	1.6 inches				
		N	2	4	10	N	15	N	31
		P	33	24	31			P	88
		K	68	57	56			K	181

Fields in Permanent Irrigated Pasture with Pasture Manure, East Dairy Lagoon Water, and Compost Applied with 2011/2012 0-12" Soil Test P >40 and <80 ppm
(Compost will be applied at 75% of the crop uptake rate)

500 56.91 acres
502 60.36 acres
503 58.15 acres

Name	Man App		Compost	Pasturing Cows Manure	East Dairy Lagoon Water	Mineralization		Total	
Irrigated Pasture Application Rate for fields with soil test P <40 ppm & with pasture, compost, and lagoon water nutrients applied	Y		1.55 T/ac	8.4 t/ac	1.6 inches				
		N	1.5	4	10	N	15	N	31
		P	24	24	31			P	79
		K	51	57	56			K	164

Fields in Permanent Irrigated Pasture with Pasture Manure, East Dairy Lagoon Water, and Compost Applied with 2011/2012 0-12" Soil Test P>80 ppm
(Compost will be applied at 50% of the crop uptake rate)

None

Name	Man App		Compost	Pasturing Cows Manure	East Dairy Lagoon Water	Mineralization		Total	
Irrigated Pasture Application Rate for fields with soil test P <40 ppm & with pasture, compost, and lagoon water nutrients applied	Y		1.1 T/ac	8.4 t/ac	1.6 inches				
		N	1	4	10	N	15	N	30
		P	17	24	31			P	72
		K	34	57	56			K	147

Fields in Permanent Irrigated Pasture With with 2011/2012 0-12" Soil Test P <40 ppm Pasture Manure, Compost, and West Dairy Runoff Are Applied
(Compost will be applied at 100% of the crop uptake rate)
154 29.18 acres

Name	Man App		Compost	Pasturing Cows Manure	West Dairy Runoff Water	Mineralization		Total	
Irrigated Pasture	Y		4.2 T/ac	8.4 t/ac	0.26 inches				
pasture, compost, and lagoon water nutrients applied		N	4	4	1.2	N	15	N	24
		P	63	24	1.3			P	88
		K	130	57	4.0			K	191

Fields in Permanent Irrigated Pasture With with 2011/2012 0-12" Soil Test P >40 and <80ppm Pasture Manure, Compost, and West Dairy Runoff Are Applied
(Compost will be applied at 75% of the crop uptake rate)
132 26 acres 155 24.46 acres

Name	Man App		Compost	Pasturing Cows Manure	West Dairy Runoff Water	Mineralization		Total	
Irrigated Pasture	Y		3.2 T/ac	8.4 t/ac	0.26 inches				
pasture, compost, and lagoon water nutrients applied		N	9.5	4	1.2	N	15	N	24
		P	46	24	1.3			P	88
		K	102	57	4.0			K	191

Fields in Permanent Irrigated Pasture With with 2011/2012 0-12" Soil Test P >80 ppm Pasture Manure, Compost, and West Dairy Runoff Are Applied
(Compost will be applied at 50% of the crop uptake rate)
131 120.6 acres 140 93.05 acres 153 77.6 acres
133 36.79 acres 145 55.36 acres

Name	Man App		Compost	Pasturing Cows Manure	West Dairy Runoff Water	Mineralization		Total	
Irrigated Pasture	Y		2.15 T/ac	8.4 t/ac	0.26 inches				
pasture, compost, and lagoon water nutrients applied		N	7	4	1.2	N	15	N	24
		P	32	24	1.3			P	88
		K	68	57	4.0			K	191

Fields in Permanent Dry Pasture With 2011/2012 0-12" Soil Test P <40 ppm

113 dry 148.6 acres
116 470.43 acres
117 357.7 acres
119 94.97 acres

422dry 107.44
432dry 27 acres
440-444 dry corners 85 ac.

400-401 dry corners 70.83 ac.

Name	Man App		Pasturing Cows Manure	Mineralization			Total
Dryland Pasture pasture nutrients applied	Y		2.2 t/ac				
		N	1	N		N	1
		P	6			P	6
		K	15			K	15

Fields in permanent dry pasture with 2011/2012 0-12" Soil Test P 40 to <80

115 174.13 acres
118 186.2 acres

Name	Man App		Pasturing Cows Manure	Mineralization			Total
Dryland Pasture Application Rate is very low and is same as for fields with <40 ppm P. & with pasture nutrients applied	Y		2.2 t/ac				
		N	1	N		N	1
		P	6			P	6
		K	15			K	15

Fields in permanent dry pasture with 2011/2012 0-12" Soil Test P >80

None

Minimum Acres Required for Manure Application

Manure Group	Acres
Pasture Manure	604
Compost	1,878
Waste Storage Pond(s)	177

The acreage in the table is based on an average crop uptake of 100 lbs P_2O_5 per acre. These acreage numbers are for estimating export acreage needed.

Liquid Waste applications are to begin and end within the growing period of the active crop. Fall application of liquid effluent must be completed prior to November 15th. Applying waste outside the annual application window may be allowed upon ISDA approval, however no applications will be permitted on frozen or snow covered ground. You must contact the Department of Agriculture, Dairy Bureau at (208) 332-8550 prior to any wastewater application outside of the application season. The need for wastewater application outside of the irrigation season will be evaluated on a case by case basis.

Factors considered in granting approval will be, but are not limited to, the following:

- **Date**
- **Existing and forecasted weather conditions**
- **Moisture content of the soil**
- **Water holding capacity of the soil**
- **Frost layers in the soil**
- **Crop needs**

ISDA Nutrient Management Plan Requirements

The producer shall maintain field level records for a minimum of five years, making them available for review upon routine reviews and inspections by ISDA personnel. Records must include the following:

- **Soil tests:** The producer must soil test all fields to which nutrients (commercial fertilizer or manure) will be applied that year. Soil samples must be pulled by an ISDA certified soil sampler. If nutrients are not applied to a field, a test will not be required that year. Soil tests will however, be required prior to any future nutrient application. These soil tests should be taken from 0-12 inches and should be used to develop the annual nutrient budget for each field.

  The following regulatory samples are required once every five years:

  - Fields classified as surface water concerns will be tested at 0”-12” soil depth. The phosphorus threshold for surface water concerns are 40 parts per million (ppm). In the event phosphorus tests exceed 40 ppm, the producer shall not apply phosphorus (commercial fertilizer or manure) in excess of the estimated annual crop phosphorus uptake.

  - Fields classified as groundwater concerns will be tested at 18”-24” soil depth. The phosphorus threshold for groundwater concerns is 20 or 30 ppm (depending on soil depth). In the event phosphorus tests exceed 20 or 30 ppm, the producer shall not apply phosphorus (commercial fertilizer or manure) in excess of the estimated annual crop phosphorus uptake.

- **Nutrient (manure and chemical fertilizer) applications:** Include the following:
  - Nutrient type
  - Date
  - Amount
  - Application method

- **Exported manure:** Records should include:
  - Name & contact information of person receiving the manure
  - Type & quantity of the manure
  - Date manure was exported

EPA NPDES Nutrient Management Plan Requirements

- ✓ Notice of Intent (NOI)
- ✓ An NMP that meets the requirements of Part III.A of the permit
- ✓ Compliance with all of the applicable conditions of the permit

Horizon Organic Dairy
Analysis Of Resource Concerns

Introduction

The purpose of this nutrient management plan is to meet agricultural production goals and to certify that manure and nutrients are properly managed to minimize adverse impact to surface or groundwater. Plans are written in cooperation with the producer to:

1) Assure proper containment of animal manure and process waste water.

2) Assess resource concerns which exist on the property.

3) Budget nutrient sources to optimize crop water and nutrient needs. Nutrient sources include commercial fertilizers, animal manure, mineralization of previous crop soil organic matter, accounting of residues, and irrigation water.

4) When applicable, assess irrigation water management to minimize movement of nutrients beyond the root zone or with runoff.

If animal manure and/or commercial fertilizers are not properly managed, contaminants may negatively impact surface and/or groundwater. Some water resource contaminants associated with poorly managed animal manure and fertilizers are:

Phosphorus in the soil readily adsorbs to soil particles; thus, erosion of soil by surface runoff is the general mode of phosphorus transport. Even at very low concentrations, phosphorus can result in plant and algae blooms in surface water bodies. Alga blooms are a nuisance to boaters, irrigators, and others. Toxins released by certain algae can be lethal to livestock or other animals that drink the water. Dissolved oxygen in the water is depleted as algae die and decompose, sometimes causing fish kills.

Nitrogen in the form of nitrate (NO_3^-) is highly water-soluble and will move with water, particularly down the soil profile past the root zone if not utilized by plants (thus becoming a groundwater contamination issue).Nitrates are toxic to infants under 6 months, and to livestock at high concentrations. In surface water, excess nitrogen, like phosphorus, can result in nuisance plant and algae growth.

Organic matter in high load decreases dissolved oxygen in a surface water body when it decomposes. Low levels of dissolved oxygen is harmful or even fatal to fish and other aquatic life.

Bacteria and microorganism illnesses (pathogens) potentially transmitted through water by animal manure include Giardia, Typhoid Fever, Cryptosporidium, and Cholera. Pathogens from animal waste can negatively impact surface and groundwater quality.

Facility Description
Owner Information

Owner: Horizon Organic Dairy

Address: 2577 East 500 South
Paul, Idaho 83347

Phone: 208-438-8450

Location
Site Map: Facility site plan illustrated in Figure 1

Soil Conservation District: North Side

County: Jerome

Watershed Basin: Upper Snake-rock (USGS Hydrologic Unit Code # 17040212)

FARM RESOURCE CONCERNS

Horizon Organic West Dairy Facility and #2 is located in a watershed containing water quality limited stream segments listed according to the Clean Water Act. Stream segments are listed because a water quality parameter prevents the attainment of the "Fishable/Swimmable" goal of the Clean Water Act.

WATERBODY	BOUNDARIES	BACT	CHAN STAB	DO	FLOW ALT	HAB ALT	MET HG	MET	NH3	NUTR	O_G	ORG	PEST	PH	SAL	SED	TDG	TEMP	UNKN	*
Snake River	Milner Dam to Murtaugh	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	☑

Horizon Organic Dairy is located in a critical Nitrate-Nitrogen management area **Snake P.-SW, Priority 2**. Nitrate Management Areas are designated based upon ground water quality sampling results. Two priority groups exist as follows:

Priority 1 is designated because at least 25% of the ground water sampling locations within the area exceed 5-milligrams/liter nitrate. This is one-half of the maximum contaminant level of 10-milligrams/liter nitrate. This nitrate concentration is considered evidence of significant degradation. Public drinking water systems are required to increase monitoring frequency when this level is reached.

Priority 2 is designated because at least 50% of the ground water sampling locations within the area exceed 2-milligrams/liter nitrate. This concentration threshold provides an indication of human-caused (anthropogenic) impacts. The upper limit for naturally occurring (background) concentrations of nitrate is considered to be about 2 mg/l.

Horizon Organic Dairy is located in a sole source aquifer area - Eastern Snake River Plain Aquifer.

Depth Limiting Subsurface Features

Field Name	Subsurface Feature	Depth from Surface (in)
100	Fractured Bedrock	12
	Water Table	>72
101	Fractured Bedrock	12
	Water Table	>72
102	Fractured Bedrock	12
	Water Table	>72
103	Fractured Bedrock	12
	Water Table	>72
104	Fractured Bedrock	12
	Water Table	>72
105	Water Table	>72
106	Water Table	>72
107	Fractured Bedrock	20
	Water Table	>72
108	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
109	Fractured Bedrock	10
	Water Table	>72
110	Water Table	>72
111	Water Table	>72
112	Fractured Bedrock	20
	Water Table	>72
113	Fractured Bedrock	12
	Water Table	>72
113dry	Fractured Bedrock	12
	Water Table	>72
114	Water Table	>72
115	Fractured Bedrock	10
	Water Table	>72
116	Fractured Bedrock	10

	Water Table	>72
117	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
118	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
119	Fractured Bedrock	12
	Water Table	>72
130	Hard Pan	20
	Water Table	>72
131	Hard Pan	20
	Water Table	>72
132	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
133	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
134	Water Table	>72
140	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
141	Fractured Bedrock	12
	Water Table	>72
142	Fractured Bedrock	10
	Water Table	>72
143	Fractured Bedrock	12
	Water Table	>72
144	Fractured Bedrock	10
	Water Table	>72
145	Water Table	>72
150c	Fractured Bedrock	12
	Water Table	>72
150p	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
152	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
153	Fractured Bedrock	12

	Water Table	>72
154	Fractured Bedrock	12
	Water Table	>72
155	Fractured Bedrock	12
	Water Table	>72
200	Hard Pan	20
	Water Table	>72
200c	Hard Pan	20
	Water Table	>72
201	Water Table	>72
201c	Water Table	>72
202	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
202c	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
203	Fractured Bedrock	12
	Water Table	>72
203c	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
204	Fractured Bedrock	12
	Water Table	>72
204c	Fractured Bedrock	12
	Water Table	>72
205	Fractured Bedrock	12
	Water Table	>72
206	Fractured Bedrock	12
	Water Table	>72
206ec	Fractured Bedrock	12
	Water Table	>72
206wc	Fractured Bedrock	12
	Water Table	>72
207 &207c	Fractured Bedrock	12
	Water Table	>72
210	Hard Pan	20
	Water Table	>72
210hl	Hard Pan	20
	Water Table	>72
211	Water Table	>72

300	Fractured Bedrock	12
	Water Table	>72
301	Fractured Bedrock	12
	Water Table	>72
302a	Fractured Bedrock	12
	Water Table	>72
303a	Fractured Bedrock	12
	Water Table	>72
304	Fractured Bedrock	20
	Water Table	>72
305	Fractured Bedrock	20
	Water Table	>72
306	Fractured Bedrock	20
	Water Table	>72
307	Fractured Bedrock	20
	Water Table	>72
308	Fractured Bedrock	20
	Water Table	>72
309	Fractured Bedrock	20
	Water Table	>72
400	Fractured Bedrock	20
	Water Table	>72
400 & 401 dry corners	Fractured Bedrock	12
	Water Table	>72
401	Fractured Bedrock	20
	Water Table	>72
402p	Hard Pan	20
	Water Table	>72
402c	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
404	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
405	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
420	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
421	Fractured Bedrock	20

	Water Table	>72
422dc	Fractured Bedrock	20
	Water Table	>72
422p	Fractured Bedrock	20
	Water Table	>72
423	Fractured Bedrock	12
	Water Table	>72
424	Fractured Bedrock	12
	Water Table	>72
430	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
431	Hard Pan	20
	Water Table	>72
432dry	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
432p	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
433	Hard Pan	20
	Water Table	>72
434	Hard Pan	20
	Water Table	>72
435	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
440	Water Table	>72
440 to 444 dry corners	Fractured Bedrock	20
	Water Table	>72
441	Fractured Bedrock	20
	Water Table	>72
442	Fractured Bedrock	20
	Water Table	>72
443	Fractured Bedrock	20
	Water Table	>72
444	Fractured Bedrock	12
	Water Table	>72
450	Fractured Bedrock	20

	Water Table	>72
451	Fractured Bedrock	20
	Water Table	>72
452	Water Table	>72
500	Hard Pan	20
	Water Table	>72
501	Hard Pan	20
	Water Table	>72
502	Hard Pan	20
	Water Table	>72
503	Hard Pan	20
	Water Table	>72
504	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
505	Fractured Bedrock	12
	Water Table	>72
506	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
507	Fractured Bedrock	12
	Water Table	>72
601	Fractured Bedrock	20
	Water Table	>72
700	Hard Pan	20
	Water Table	>72
701	Hard Pan	20
	Fractured Bedrock	10
	Water Table	>72
702	Hard Pan	20
	Water Table	>72
703	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72
Compost Site	Fractured Bedrock	10
	Water Table	>72
WD runoff area	Hard Pan	20
	Water Table	>72
ED runoff area	Hard Pan	20
	Fractured Bedrock	12
	Water Table	>72

ISDA Regulations And The Idaho Nutrient Management Standard

Nutrient management plans for animal agricultural operations regulated by the Idaho State Department of Agriculture (ISDA) must be approved by the Idaho State Department of Agriculture and must follow the Natural Resource Conservation Service (NRCS) Agriculture Waste Management Field Handbook and the Idaho Nutrient Management Standard. ISDA regulation and the Standard use soil test phosphorus as the indicator for environmental impact from agricultural production practices. The Idaho Nutrient Management Standard is based on a threshold soil test phosphorus level (TH), above which there is no agronomic advantage to application of phosphorus.

The Idaho Nutrient Management Standard categorizes fields as a surface water concern or a groundwater concern. A surface water concern indicates that runoff leaves the contiguous operating unit from normal storm events, rain on snow, frozen ground, or irrigation. The soil phosphorus threshold for a field with a surface water concern is 40 ppm phosphorus for basic soils (pH > 7) tested with the Olsen method; 60 ppm phosphorus for acidic soils (pH < 7) tested with the Bray method; and 6 ppm phosphorus for acidic soils tested with the Morgan method (0-12"Soil Sample Depth).

A groundwater resource concern indicates that runoff does not leave the contiguous operating unit from normal storm events, rain on snow, frozen ground, or irrigation. There are two sub-categories for fields identified as having a groundwater concern. The first category applies to fields with a resource concern within the first five feet of the soil profile. A resource concern could be shallow soils, gravel, cobble, bedrock, high groundwater table, or a drained field. These fields are indicated as a groundwater concern <5'. The soil phosphorus threshold for a field with a groundwater concern <5' is 20 ppm phosphorus for soils tested with the Olsen method; 25 ppm phosphorus for soils tested with the Bray method and 2.5ppm phosphorus for soils tested with the Morgan method (18-24" Soil Sample Depth).

If a field is not classified as having a surface water concern or a groundwater <5' concern, by default it is classified as having a groundwater concern >5'. The soil phosphorus threshold for a field with a groundwater concern >5' is 30 ppm phosphorus for soils tested with the Olsen method; 45 ppm phosphorus for soils tested with the Bray method; and 4.5 ppm phosphorus for soils tested with the Morgan method (18-247" Soil Sample Depth).

FIELD PHOSPHORUS THRESHOLD

Field	Resource Concern	P Threshold (ppm)	P Threshold Soil Test Depth
100	Groundwater < 5'	20	18 - 24"
101	Groundwater < 5'	20	18 - 24"
102	Groundwater <	20	18 - 24"

	5'		
103	Groundwater < 5'	20	18 - 24"
104	Groundwater < 5'	20	18 - 24"
105	Groundwater >=5'	30	18 - 24"
106	Groundwater >=5'	30	18 - 24"
107	Groundwater < 5'	20	18 - 24"
108	Groundwater < 5'	20	18 - 24"
109	Groundwater < 5'	20	18 - 24"
110	Groundwater >=5'	30	18 - 24"
111	Groundwater >=5'	30	18 - 24"
112	Groundwater < 5'	20	18 - 24"
113	Groundwater < 5'	20	18 - 24"
113dry	Groundwater < 5'	20	18 - 24"
114	Groundwater >=5'	30	18 - 24"
115	Groundwater < 5'	20	18 - 24"
116	Surface Water	40	0 - 12"
117	Groundwater < 5'	20	18 - 24"
118	Groundwater < 5'	20	18 - 24"

119	Groundwater < 5'	20	18 - 24"
130	Groundwater < 5'	20	18 - 24"
131	Groundwater < 5'	20	18 - 24"
132	Groundwater < 5'	20	18 - 24"
133	Groundwater < 5'	20	18 - 24"
134	Groundwater >=5'	30	18 - 24"
140	Groundwater < 5'	20	18 - 24"
141	Groundwater < 5'	20	18 - 24"
142	Groundwater < 5'	20	18 - 24"
143	Groundwater < 5'	20	18 - 24"
144	Groundwater < 5'	20	18 - 24"
145	Groundwater >=5'	30	18 - 24"
150c	Groundwater < 5'	20	18 - 24"
150p	Groundwater < 5'	20	18 - 24"
152	Groundwater < 5'	20	18 - 24"
153	Groundwater < 5'	20	18 - 24"
154	Groundwater < 5'	20	18 - 24"

155	Groundwater < 5'	20	18 - 24"
200	Groundwater < 5'	20	18 - 24"
200c	Groundwater < 5'	20	18 - 24"
201	Groundwater >=5'	30	18 - 24"
201c	Groundwater >=5'	30	18 - 24"
202	Groundwater < 5'	20	18 - 24"
202c	Groundwater < 5'	20	18 - 24"
203	Groundwater < 5'	20	18 - 24"
203c	Groundwater < 5'	20	18 - 24"
204	Groundwater < 5'	20	18 - 24"
204c	Groundwater < 5'	20	18 - 24"
205	Groundwater < 5'	20	18 - 24"
206	Groundwater < 5'	20	18 - 24"
206ec	Groundwater < 5'	20	18 - 24"
206wc	Groundwater < 5'	20	18 - 24"
207	Groundwater < 5'	20	18 - 24"
207c	Groundwater < 5'	20	18 - 24"

210	Groundwater < 5'	20	18 - 24"
210hl	Groundwater < 5'	20	18 - 24"
211	Groundwater >=5'	30	18 - 24"
300	Groundwater < 5'	20	18 - 24"
301	Groundwater < 5'	20	18 - 24"
302a	Groundwater < 5'	20	18 - 24"
303a	Groundwater < 5'	20	18 - 24"
304	Groundwater < 5'	20	18 - 24"
305	Groundwater < 5'	20	18 - 24"
306	Groundwater < 5'	20	18 - 24"
307	Groundwater < 5'	20	18 - 24"
308	Groundwater < 5'	20	18 - 24"
309	Groundwater < 5'	20	18 - 24"
400	Groundwater < 5'	20	18 - 24"
400 401 dry corners	Groundwater < 5'	20	18 - 24"
401	Groundwater < 5'	20	18 - 24"
402	Groundwater < 5'	20	18 - 24"

402c	Groundwater < 5'	20	18 - 24"
404	Groundwater < 5'	20	18 - 24"
405	Groundwater < 5'	20	18 - 24"
420	Groundwater < 5'	20	18 - 24"
421	Groundwater < 5'	20	18 - 24"
422dc	Groundwater < 5'	20	18 - 24"
422p	Groundwater < 5'	20	18 - 24"
423 &424	Groundwater < 5'	20	18 - 24"
430	Groundwater < 5'	20	18 - 24"
431	Groundwater < 5'	20	18 - 24"
432dry	Groundwater < 5'	20	18 - 24"
432p	Groundwater < 5'	20	18 - 24"
433	Groundwater < 5'	20	18 - 24"
434	Groundwater < 5'	20	18 - 24"
435	Groundwater < 5'	20	18 - 24"
440	Groundwater >=5'	30	18 - 24"
440 to 444 dry corners	Groundwater < 5'	20	18 - 24"

441	Groundwater < 5'	20	18 - 24"
442	Groundwater < 5'	20	18 - 24"
443	Groundwater < 5'	20	18 - 24"
444	Groundwater < 5'	20	18 - 24"
450	Groundwater < 5'	20	18 - 24"
451	Groundwater < 5'	20	18 - 24"
452	Groundwater >=5'	30	18 - 24"
500	Groundwater < 5'	20	18 - 24"
501	Groundwater < 5'	20	18 - 24"
502	Groundwater < 5'	20	18 - 24"
503	Groundwater < 5'	20	18 - 24"
504	Groundwater < 5'	20	18 - 24"
505	Groundwater < 5'	20	18 - 24"
506	Groundwater < 5'	20	18 - 24"
507	Groundwater < 5'	20	18 - 24"
601	Groundwater < 5'	20	18 - 24"
700	Groundwater < 5'	20	18 - 24"

701	Groundwater < 5'	20	18 - 24"
702	Groundwater < 5'	20	18 - 24"
703	Groundwater < 5'	20	18 - 24"
Compost Site	Groundwater < 5'	20	18 - 24"
d1 runoff area	Surface Water	40	0 - 12"
d2 ro area	Surface Water	40	0 - 12"

Annual Nutrient Budget

The following crop nutrient budget is based on soil test data and cropping information. It is for one year for the following field and specified crop information:

Nutrient Budget Summary

Field: 100 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 101 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 102 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 103 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 104 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 105 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 106 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 107 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 108 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 109 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 110 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 111 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 112 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 113 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 113dry **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 114 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 115 **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 116 **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 117 **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 118 **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 119 **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 130 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

Field: 131 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 132 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 133 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 134 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 140 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 141 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 142 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 143 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 144 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 145 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 150c **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 150p **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 152 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 153 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 154 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 155 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 200 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 200c **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 201 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 201c **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 202 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 202c **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 203 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 203c **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 204 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 204c **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 205 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 206 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 206ec **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 206wc **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 207 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 207c **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 210 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 210hl **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 211 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 300 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 301 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 302a **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 303a **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 304 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 305 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 306 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 307 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 308 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	-38		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	281	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	252	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 309 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	243	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	214	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 400 **Crop:** S-ID, Corn-Field, Silage, Double Cropped, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 400 401 dry corners **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 401 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 402 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 402c **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 404 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 405 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 420 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 421 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 422dc **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 422p **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 423&424 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 430 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 431 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	243	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	214	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 432dry **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Pasture(s)	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 432p **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 433 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 434 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 435 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 440 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	243	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	214	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 440 to 444 dry corners **Crop:** S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated **Yield:** 1.5

	N	P205	K20
Crop Nutrient Uptake	87	30	70
Crop Nutrient Requirement	100	30	70
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	100	29.5	70.2
Compost	1	6	15
Estimated Remaining Nutrients Required *	99	23.5	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 441 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 442 **Crop:** S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated **Yield:** 5

	N	P205	K20
Crop Nutrient Uptake	243	57	234
Crop Nutrient Requirement	243	57	234
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	243	57.2	234
Compost	29	55	120
Estimated Remaining Nutrients Required *	214	2	114
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 443 **Crop:** S-ID, Corn-Field, Silage, Irrigated **Yield:** 20

	N	P205	K20
Crop Nutrient Uptake	175	61	175
Crop Nutrient Requirement	210	61	175
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	54		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	156	60.9	174.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	127	6	55
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 444 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 450 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 451 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 452 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 500 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 501 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 502 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 503 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 504 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 505 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 506 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 507 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	2	33	68
Waste Storage Pond(s)	10	31	56
Estimated Remaining Nutrients Required *	134	0	29
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 601 **Crop:** S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated **Yield:** 4.5

	N	P205	K20
Crop Nutrient Uptake	261	89	211
Crop Nutrient Requirement	150	89	211
Nutrients From Soil	?		
from Mineralized Nitrogen	0		
from Prior Crops	0		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	150	88.6	210.6
Pasture(s)	4	24	57
Compost	14	65	136
Estimated Remaining Nutrients Required *	132	0	17
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 700 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 701 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 702 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Field: 703 **Crop:** S-ID, Barley-Spring **Yield:** 120

	N	P205	K20
Crop Nutrient Uptake	105	45	30
Crop Nutrient Requirement	180	45	30
Nutrients From Soil	?		
from Mineralized Nitrogen	45		
from Prior Crops	-10		
from Prior Bio-Nutrients	0		
from Irrigation Water	0		0
Nutrient Balance from above *	145	44.8	29.7
Compost	29	55	120
Estimated Remaining Nutrients Required *	116	-10	-90
Commercial Fertilizer Application			
Final Nutrient Balance *			

* Positive values indicate additional nutrients are required; negative values indicate a nutrient surplus

Waste Storage And Handling
Livestock Unit Waste Characteristics

Description	Animal	Number	Average Animal Weight	Days Collected	Housing	Bedding Type	Bedding (tons)	Waste (tons)
Milkers-freestall	Lactating Cow	2400	1,400	202	Freestall	Compost	1,087	28,864
Milkers-Pasture	Lactating Cow	2400	1,400	76	Winter Feeding Area vegetated	None	0	10,851
Milkers-Exercise Pen	Lactating Cow	2400	1,400	87	Open Lot	None	0	12,370
1000# Heifers on Pasture	Dairy Heifer	700	1,000	152.3	Winter Feeding Area vegetated	None	0	4,775
550# Heifers on Pasture	Dairy Heifer	400	550	152.4	Winter Feeding Area vegetated	None	0	1,502
1000 # Heifers OL	Dairy Heifer	700	1,000	212.7	Open Lot	Chopped Straw	819	6,671
550# Heifers OL	Dairy Heifer	400	550	212.6	Open Lot	Chopped Straw	257	2,095
900# heifers pasture	Dairy Heifer	400	900	152.4	Winter Feeding Area vegetated	None	0	2,458
900# heifers OL	Dairy Heifer	400	900	212.6	Open Lot	Chopped Straw	421	3,429
Dry Cows Pasture	Dry Cow	200	1,400	151.5	Winter Feeding Area vegetated	None	0	1,833
Dry Cows OL	Dry Cow	200	1,400	213.5	Open Lot	Chopped Straw	329	2,584

Maternity Cows OL	Dry Cow	100	1,400	273.8	Open Lot	Chopped Straw	211	1,657
Maternity Heifers OL	Dry Cow	100	1,400	273.8	Open Lot	Chopped Straw	211	1,657
Maternity Heifers Pasture	Dry Cow	100	1,400	91.2	Winter Feeding Area vegetated	None	0	552
Maternity Cows Pasture	Dry Cow	100	1,400	91.2	Winter Feeding Area vegetated	None	0	552
Dry Cow Facility Calves	Dairy Calf	400	250	365	Open Lot	Chopped Straw	201	1,635

Manure/Biosolid Groups

Manure Group	Storage Type	Application Method	Days to Incorporation	Nitrogen Retention(%)	Annual Volume (ft3)	Annual Weight (tons)
Pasture(s)	Pasture	Broadcast, no incorporation, no containment	>7 days	14	686,046	21,267
Compost	Manure Stored in Open Lot, Arid Region	Broadcast, with incorporation, no containment	>7 days	9 (due to composting)	920,654 (reduced by 50%-visual estimate)	13,070 (reduced according to compost analysis)
Waste Storage Pond(s)	Waste Storage Pond, Diluted > 50%	Irrigation	N/A	26	163,816	5,078

Manure Distribution

Manure Group		1000 # Heifers OL	1000# Heifers on Pasture	200# calves	300# calves OL	550# Heifers OL	550# Heifers on Pasture	900# heifers OL	900# heifers pasture	Dry Cows OL	Dry Cows Pasture	Milkers-Exercise Pen	Milkers-freestall	Milkers-Pasture
Waste Storage Pond(s)	**% To Group**	N/A										9	9	9
Compost	**% To Group**	100		100	100	100		100		100		91	91	6
Pasture(s)	**% To Group**	N/A	100				100		100		100			85

Total Nutrients Produced

	Pounds N	Pounds P_20_5	Pounds K_20	% of Total	Weight (in Tons)
Total Nutrients Produced	269,316	265,902	586,551	100	---
Pasture(s)	25,569	60,401	143,261	20	21,267
Compost	49,438	187,823	408,709	74	13,070
Waste Storage Pond(s)	13,038	17,678	34,581	6	5,078
Nutrients Onsite	269,316	265,902	586,551	100	
Nutrients Exported	0	0	0		

Dairy Water Values

The East Dairy Facility Water Values, gallons			
Dairy Process Water:	7900	**Milk Parlor Cleaning Water:**	22000
Dairy Parlor Water:	5400	Hose Volume:	0
Bulk Tank Water:	2500	Flush Volume:	0
Cow Prep Water:	4680	Deck Flush Volume:	22000
Automatic Backflush:	0	Other Volume:	0
Sprinkler Volume:	0	**Holding Pen Cleaning Water:**	69420
Manual Cow Prep:	4680	Hose Volume:	0
Dairy Equipment Water:	0	Flush Volume:	69420
Compressor Water:	0	Other Volume:	0
Vacuum Pump Water:	0	**Freestall/Alley Flush:**	0
Pre-Cooler Water:	0	**Excess Water**	
Glycol Chiller Water:	0	Cow Water:	0
Miscellaneous Equipment Water:	1000	Group 1:	0

Washing Machine Water:	0	Group 2:	91420
Miscellaneous Water:	800		
Milkhouse Water	200	**Total Dairy Water:**	**105,000**

Bulk Tank Storage

The East Dairy Facility Bulk Tank(s)		
Bulk Tank ID	Size	Volume
1	20,000	1250
2	20,000	1250

Total Annual Liquid Capacity Required				
Bio-Nutrient Group	Recommended Capacity Cubic Feet	% Contained	Storage Days	Storage Vol. Cubic Feet
Waste Storage Ponds	East Dairy Facility 163,816	100	180	163,816
Runoff to Storage Then To Land Application	West Dairy (Including Feed Storage Areas 2-3)	100	180	746,822
	East Dairy	100	180	621,252
Runoff to Evaporation	West Dairy Feed Storage Area 1 Dry Cow Facility	100	180	390,104 388,938
	Heifer North Facility Heifer South Facility	100	180	549,240 156,449
	Feed Storage Area 4 Feed Storage Area 5	100	180	119,603 74,589
	North Compost Area* South Compost Area*	100	180	695,200 1,647,150
Process Water	East Dairy 5,110,000	100	180	East Dairy 2,555,000
East Dairy Facility Total Liquid Storage Required		100	180	+2,555,000+621,252+ 163,816 = ***3,340,068***
West Dairy Facility Total Liquid Storage Required		100	180	1,136,926

*The storage volume for both compost areas was calculated based on a 100 yr-24 hr storm, to ensure no runoff.

Total Annual Solid Capacity Required		
Bio-Nutrient Group	Recommended Capacity Cubic Feet	% Contained
Compost	920,654	100%
Pasture(s)	686,046	100%
1000 # Heifers OL	119,127	100%
550# Heifers OL	37,382	100%
900# heifers OL	61,236	100%
Milkers-freestall	135,875	100%
Maternity Heifers OL	30,691	100%
Dry Cows OL	47,855	100%
Maternity Cows OL	30,691	100%
Dry Cow Facility Calves	29,236	100%

Distribution Among Containers

Storage Unit Name	Days Stored	Waste Storage Pond(s)	Compost	Pasture(s)	West Dairy Runoff	East Dairy Runoff	East Dairy ProcessWater
ED Lagoon	180	100%				96%	100%
Settling Basin 1						2%	
Settling Basin 2						2%	
West Dairy Pond 1-New West Pond					90%		
WD Pond 2					3%		
WD Pond 3					3%		
WD Pond 4					4%		
N. Compost Area R/O Storage			5%				
S. Compost Area R/O Storage			95%				

Storage Unit Name	Days Stored	Milkers-freestall - Bedding	1000 # Heifers OL - Bedding	550# Heifers OL - Bedding	900# heifers OL - Bedding	Dry Cows OL - Bedding
ED Lagoon	180	100%				
Settling Basin 1						
Settling Basin 2						
West Dairy Pond 1-New West Pond			100%	100%	100%	
WD Pond 2						
WD Pond 3						
WD Pond 4						
N. Compost Area R/O Storage						

S. Compost Area R/O Storage						
Dry Cow Runoff Collection Area						100%

Storage Unit Name	Days Stored	Dry Cow Runoff	Heifer North Runoff	Heifer South Runoff	Feed Storage Area 1 Runoff	Feed Storage Area 2 Runoff	Feed Storage Area 3 Runoff	Feed Storage Area 4 Runoff	WD Pond 1	WD Pond 4
Dry Cow Runoff Storage	180	100%								
Heifer North Runoff Storage			100%							
Heifer South Runoff Storage				100%						
Feed Storage Area 1 Runoff Storage					100%				100%	
Feed Storage Area 2 Runoff Storage						100%				100%
Feed Storage Area 3 Runoff Storage							100%			
Feed Storage Area 4 Runoff Storage								100%		

Existing Liquid And Solid Manure Storage Containers Capacity

Container Name	Volume (ft3)	Storage Period (Days)	Length	Width	Depth	Slope	Diameter	Existing	Proposed
East Dairy Facility Lagoon	3,478,722.0	180	1,518.0	384.0	7.5	3.0	0.0	Yes	No
East Dairy Facility Settling Basin 1	34,626.0	180	344.0	50.0	4.0	3.0	0.0	Yes	No
East Dairy Facility Settling Basin 2	34,626.0	180	344.0	50.0	4.0	3.0	0.0	Yes	No
West Dairy Facility Pond 1	1,555,713.0	180	750.0	190.0	13.1	2.0	0.0	Yes	No
West Dairy Facility Pond 2	631,881.0	180	685.0	131.0	8.2	2.0	0.0	Yes	No
West Dairy Facility Pond 3	1,219,941.0	180	490.0	260.0	10.9	2.0	0.0	Yes	No
West Dairy Facility Pond 4	847,155	180	735.0	175.0	8.6	2.0	0.0	Yes	No
North Compost Area Manure Storage	1,920,000.0	180	4,000.0	40.0	12.0		0.0	Yes	No
South Compost Area Manure Storage	2,160,000.0	180	30,000.0	12.0	12.0		0.0	Yes	No
Dry Cow Runoff Storage	400,000	180	1,000.0	400.0	1.0		0.0	Yes	No

Heifer North Runoff Storage	570,000.0	180	2,300	113	2.2		0.0	Yes	No
Heifer South Runoff Storage	180,000.0	180	661	54.5	5		0.0	Yes	No
Feed Storage Area 1 Runoff Storage	390,104	180	Flows to WD Pond 4						
Feed Storage Area 2 Runoff Storage	205,563	180	Flows to WD Pond 1						
Feed Storage Area 3 Runoff Storage	90,757	180	Pumped to WD Pond 4						
Feed Storage Area 4 Runoff Storage	119,603	180	789.00	100.00	1.6	These berms will be built up according to the results of the recent hydrologic analyses.		119,603	180
Feed Storage Area 5 Runoff Storage	74,589	180	320	100	2.4			74,589	180
North Compost Area Runoff Storage	695,200	180	1,600	100	4			695,200	180
South Compost Area Runoff Storage	1,647,150	180	3,526	100	2.4			1,647,150	180

Containment Of Housing Facility Waste And Corral Runoff

It is important that water from housing facilities and contaminated runoff from corrals be contained and/or diverted to the lagoon storage system. As stated in the Idaho State Department of Agriculture (ISDA) regulation, a discharge is allowed only under large precipitation events (>25yr, 24hr storm event). Lagoon structures must be properly designed, operated, and maintained to contain all barn wastewater and contaminated runoff from a 25-year, 24-hour rainfall event for the site location and maintained to contain all runoff from accumulation of winter precipitation from a one in five-year winter. Animals confined in the CAFO may not have direct contact with canals, streams, lakes, or other surface waters.

Bio-Nutrient Export Info

No Export

Analysis Of Cropping System

Farming Operation Rotations

Total Acres: 8,085

Crop Rotation Name: Rotation 1

Crop	Yield	Yield Units	N Uptake	P_2O_5 Uptake	K_2O Uptake
S-ID, Corn-Field, Silage, Irrigated	20	tons/acre	175	60.9	174.7
-ID, Barley-Spring /	100 bu./ac.		87	37	25
Red Clover-Winter	1 ton/ac.		58	8	60
S-ID, Corn-Field, Silage, Irrigated	20	tons/acre	175	60.9	174.7
S-ID, Barley-Spring /	100 bu./ac.		87	37	25
Red Clover-Winter	1 ton/ac.		58	8	60
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5	tons/acre	243	57.2	234
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5	tons/acre	243	57.2	234
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5	tons/acre	243	57.2	234
Average				55	

THIS IS NOT A FERTILIZER RECOMMENDATION

Crop Rotation Name: Rotation 1 And Rotation 1 Corners Alternative Crops

Crop	Yield	Yield Units	N Uptake	P_2O_5 Uptake	K_2O Uptake
S-ID, Corn-Field, Silage, Irrigated	20	tons/acre	175	60.9	174.7
Spring Barley or **Spring** Peas **Winter** Mustard	100 bu./acre 2 tons/acre 0.6 ton/acre		87 81 29	37 20 18	25 55 9
S-ID, Corn-Field, Silage, Irrigated	20	tons/acre	175	60.9	174.7
Spring Barley **Winter** Triticale	100 bu./acre 3 tons/acre		87	37 22	25
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5	tons/acre	243	57.2	234
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5	tons/acre	243	57.2	234
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5	tons/acre	243	57.2	234
Average				57	

Crop Rotation Name: Irrigated Pasture

Crop	Yield	Yield Units	N Uptake	P_20_5 Uptake	K_20 Uptake
S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated	4.5	tons/acre	261	88.6	210.6
S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated	4.5	tons/acre	261	88.6	210.6
S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated	4.5	tons/acre	261	88.6	210.6
S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated	4.5	tons/acre	261	88.6	210.6
S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated	4.5	tons/acre	261	88.6	210.6
Average				89	

THIS IS NOT A FERTILIZER RECOMMENDATION

Crop Rotation Name: Dry Pasture

Crop	Yield	Yield Units	N Uptake	P_20_5 Uptake	K_20 Uptake
S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated	1.5	tons/acre	87	29.5	70.2
S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated	1.5	tons/acre	87	29.5	70.2
S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated	1.5	tons/acre	87	29.5	70.2
S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated	1.5	tons/acre	87	29.5	70.2
S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated	1.5	tons/acre	87	29.5	70.2
Average				30	

THIS IS NOT A FERTILIZER RECOMMENDATION

Crop Rotation Name: Rotation Corners

Crop	Yield	Yield Units	N Uptake	P_2O_5 Uptake	K_2O Uptake
S-ID, Barley-Spring	103.8	bu/acre	90.7	38.8	25.7
S-ID, Barley-Spring	103.8	bu/acre	90.7	38.8	25.7
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5.5	tons/acre	267.3	63	257.4
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5.5	tons/acre	267.3	63	257.4
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5.5	tons/acre	267.3	63	257.4
S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated	5.5	tons/acre	267.3	63	257.4
Average				55	

THIS IS NOT A FERTILIZER RECOMMENDATION

Soil Information

Table 1. Soil Type Across Each Field

Field Name	Soil Type	Percentage	Approximate Acreage	Surface Texture[1]
100	OWINZA	35	0.25	SIL
	POWER	45	0.32	SIL
	DOLMAN	90	101.07	SIL
	STARBUCK	30	4.48	SIL
	BARRYMORE	50	7.47	SIL
101	BARRYMORE	50	8.66	SIL
	STARBUCK	30	5.2	SIL
	DOLMAN	90	96.42	SIL

102	POWER	85	0.01	SIL
	BARRYMORE	50	14.21	SIL
	STARBUCK	30	8.52	SIL
	DOLMAN	90	2.86	SIL
103	OWINZA	35	3.05	SIL
	POWER	45	3.92	SIL
	BARRYMORE	50	11.32	SIL
	STARBUCK	30	6.79	SIL
104	BARRYMORE	50	0.31	SIL
	STARBUCK	30	0.19	SIL
	POWER	45	12.08	SIL
	OWINZA	35	9.39	SIL
105	DOLMAN	90	18.94	SIL
106	DOLMAN	90	10.23	SIL
107	MINVENO	90	0.96	SIL
	DOLMAN	90	85.46	SIL
108	MINVENO	90	12.23	SIL
	DOLMAN	90	33.77	SIL
	SLUKA	90	7.24	SIL
	PAULVILLE	15	1.73	L
	BANBURY	30	3.47	L
	ROCK OUTCROP	40	4.62	
	SLUKA	90	3.21	SIL
109	ROCK OUTCROP	40	1.06	
	POWER	45	0.03	SIL
	MINVENO	90	32.6	SIL

	DOLMAN	90	21.01	SIL
	PAULVILLE	15	0.4	L
	OWINZA	35	0.02	SIL
	BANBURY	30	0.8	L
110	DOLMAN	90	50.28	SIL
	POWER	45	2.44	SIL
	OWINZA	35	1.9	SIL
111	DOLMAN	90	16.86	SIL
112	DOLMAN	90	5.29	SIL
	MINVENO	90	4	SIL
113	DOLMAN	90	31.71	SIL
	STARBUCK	30	0.59	SIL
	BARRYMORE	50	0.98	SIL
113dry	BARRYMORE	50	65.56	SIL
	STARBUCK	30	39.34	SIL
	CHIARA	85	0.99	SIL
	DOLMAN	90	14.7	SIL
114	DOLMAN	90	11.56	SIL
115	BARRYMORE	50	49.94	SIL
	OWINZA	35	17.94	SIL
	STARBUCK	30	29.96	SIL
	DOLMAN	90	10.16	SIL
	POWER	85	9.94	SIL
	POWER	45	23.07	SIL
116	ROCK OUTCROP	40	127.47	
	OWINZA	35	28.4	SIL

	BANBURY	30	95.6	L
	CHIARA	85	0.02	SIL
	POWER	45	36.51	SIL
	PAULVILLE	15	47.8	L
	DOLMAN	90	37.07	SIL
	WATER	100	1.22	
	BARRYMORE	50	14.38	SIL
	STARBUCK	30	8.63	SIL
117	BARRYMORE	50	17.8	SIL
	DOLMAN	90	1.46	SIL
	STARBUCK	30	10.68	SIL
	WATER	100	1.48	
	SLUKA	90	10.63	SIL
	SLUKA	90	7.33	SIL
	PAULVILLE	15	32.85	L
	BANBURY	30	65.7	L
	ROCK OUTCROP	40	87.6	
	CHIARA	85	0.66	SIL
118	MINVENO	90	21.5	SIL
	SLUKA	90	49.43	SIL
	PAULVILLE	15	16.11	L
	BANBURY	30	32.23	L
	ROCK OUTCROP	40	42.97	
119	STARBUCK	30	19.16	SIL
	BARRYMORE	50	31.93	SIL
	BAHEM	90	5.18	SIL

130	DOLMAN	90	46.65	SIL
	POWER	85	36.99	SIL
	CHIARA	85	9.13	SIL
	SLUKA	90	11.19	SIL
	BAHEM	90	8.44	SIL
131	POWER	85	23.72	SIL
	DOLMAN	90	74	SIL
	SLUKA	90	2.99	SIL
	BAHEM	90	6.41	SIL
132	CHIARA	85	8.14	SIL
	DOLMAN	90	4.19	SIL
	BAHEM	90	10.57	SIL
133	SLUKA	90	3.97	SIL
	DOLMAN	90	5.42	SIL
	BAHEM	90	0.02	SIL
	CHIARA	85	8.66	SIL
	STARBUCK	30	2.44	SIL
	BARRYMORE	50	4.06	SIL
	SLUKA	90	36.72	SIL
134	DOLMAN	90	6.01	SIL
	POWER	85	3.46	SIL
	BAHEM	90	1.6	SIL
140	SLUKA	90	16.61	SIL
	DOLMAN	90	8.17	SIL
	STARBUCK	30	10.37	SIL
	SLUKA	90	1.28	SIL

	TULCH	90	26.63	SIL
	BARRYMORE	50	17.28	SIL
141	CHIARA	85	1.77	SIL
	BARRYMORE	50	5.64	SIL
	STARBUCK	30	3.38	SIL
	DOLMAN	90	33.76	SIL
	POWER	85	3.05	SIL
142	CHIARA	85	39.24	SIL
	PAULVILLE	15	0.04	L
	ROCK OUTCROP	40	0.1	
	BANBURY	30	0.07	L
143	STARBUCK	30	0.05	SIL
	CHIARA	85	5.45	SIL
	BARRYMORE	50	0.09	SIL
144	STARBUCK	30	1.07	SIL
	CHIARA	85	22.89	SIL
	ROCK OUTCROP	40	1.95	
	BANBURY	30	1.46	L
	BARRYMORE	50	1.78	SIL
	PAULVILLE	15	0.73	L
	DOLMAN	90	48.89	SIL
145	TULCH	90	0.11	SIL
	BAHEM	90	2.2	SIL
	DOLMAN	90	47.44	SIL
150c	STARBUCK	30	2.71	SIL
	BARRYMORE	50	4.51	SIL

	DOLMAN	90	4.76	SIL
150p	BAHEM	90	6.18	SIL
	SLUKA	90	7.66	SIL
	TULCH	90	42.01	SIL
	BARRYMORE	50	0.96	SIL
	STARBUCK	30	0.58	SIL
	DOLMAN	90	57.99	SIL
152	STARBUCK	30	9.05	SIL
	BAHEM	90	26.41	SIL
	BARRYMORE	50	15.09	SIL
	SLUKA	90	13.11	SIL
153	DOLMAN	90	32.72	SIL
	BAHEM	90	31.15	SIL
	BARRYMORE	50	3.29	SIL
	STARBUCK	30	1.98	SIL
154	BARRYMORE	50	4.02	SIL
	STARBUCK	30	2.41	SIL
	KECKO	85	12.56	FSL
	DOLMAN	90	5.74	SIL
155	DOLMAN	90	35.59	SIL
	STARBUCK	30	0.38	SIL
	BARRYMORE	50	0.64	SIL
200	SLUKA	90	18.75	SIL
	BAHEM	90	94.12	SIL
200c	BAHEM	90	23.02	SIL
	SLUKA	90	6.61	SIL

201	BAHEM	90	109.4	SIL
201c	BAHEM	90	25.66	SIL
202	BAHEM	90	103.86	SIL
	SLUKA	90	5.88	SIL
	BARRYMORE	50	1.83	SIL
	STARBUCK	30	1.1	SIL
202c	STARBUCK	30	0.54	SIL
	BAHEM	90	24.53	SIL
	SLUKA	90	3.3	SIL
	BARRYMORE	50	0.89	SIL
203	BAHEM	90	1.72	SIL
	BARRYMORE	50	29.32	SIL
	STARBUCK	30	17.59	SIL
203c	STARBUCK	30	2.53	SIL
	BAHEM	90	4.85	SIL
	BARRYMORE	50	4.22	SIL
	SLUKA	90	0.49	SIL
204	BAHEM	90	6.73	SIL
	BARRYMORE	50	28.33	SIL
	STARBUCK	30	17	SIL
204c	BAHEM	90	10.47	SIL
	BARRYMORE	50	5.41	SIL
	STARBUCK	30	3.25	SIL
205	BAHEM	90	122.74	SIL
	BARRYMORE	50	4.67	SIL
	STARBUCK	30	2.8	SIL

206	BARRYMORE	50	57.53	SIL
	SHANO	85	1.17	SIL
	BAHEM	90	0.15	SIL
	STARBUCK	30	34.52	SIL
206ec	BAHEM	90	0.1	SIL
	BARRYMORE	50	9.1	SIL
	STARBUCK	30	5.46	SIL
206wc	POWER	50	0.05	SIL
	STARBUCK	30	4.13	SIL
	BARRYMORE	50	6.88	SIL
	SHANO	85	3.61	SIL
	BAHEM	90	0.56	SIL
	MCCAIN	30	0.03	SIL
207	STARBUCK	30	5.45	SIL
	SHANO	85	31.4	SIL
	BARRYMORE	50	9.09	SIL
207c	STARBUCK	30	3.71	SIL
	BARRYMORE	50	6.18	SIL
	SHANO	85	8.96	SIL
210	SLUKA	90	54.28	SIL
210hl	BAHEM	90	47.4	SIL
	SLUKA	90	7.04	SIL
211	BAHEM	90	81.69	SIL
300	BARRYMORE	50	21.88	SIL
	BAHEM	90	77.18	SIL
	STARBUCK	30	13.13	SIL

301	STARBUCK	30	28.31	SIL
	SHANO	85	10.79	SIL
	BARRYMORE	50	47.18	SIL
302a	STARBUCK	30	4.61	SIL
	BARRYMORE	50	7.68	SIL
303a	BARRYMORE	50	8.59	SIL
	STARBUCK	30	5.15	SIL
304	MCCAIN	30	32.44	SIL
	POWER	50	54.07	SIL
305	POWER	50	40.35	SIL
	MCCAIN	30	24.21	SIL
	POWER	45	10.56	SIL
	OWINZA	35	8.21	SIL
306	POWER	50	58.64	SIL
	MCCAIN	30	35.18	SIL
307	POWER	50	33.7	SIL
	MCCAIN	30	20.22	SIL
308	POWER	50	28.91	SIL
	MCCAIN	30	17.35	SIL
309	POWER	50	10.7	SIL
	MCCAIN	30	6.42	SIL
400	MCCAIN	30	39.11	SIL
	POWER	50	65.18	SIL
400 401 dry corners	BARRYMORE	50	0.01	SIL
	STARBUCK	30	0.01	SIL
	MCCAIN	30	21.23	SIL

	POWER	50	35.39	SIL
401	POWER	50	20.38	SIL
	MCCAIN	30	12.23	SIL
402	SLUKA	90	37.16	SIL
	TULCH	90	1.57	SIL
	CHIARA	85	5.76	SIL
	BAHEM	90	43.02	SIL
402c	BAHEM	90	28.73	SIL
	SLUKA	90	11.29	SIL
	TULCH	90	20.84	SIL
	DOLMAN	90	0	SIL
	ROCK OUTCROP	35	1.63	
	CHIARA	85	0.71	SIL
	BANBURY	55	2.57	L
404	SLUKA	90	26.24	SIL
	BANBURY	55	1.49	L
	CHIARA	85	0.92	SIL
	BAHEM	90	26.52	SIL
	ROCK OUTCROP	35	0.95	
405	BARRYMORE	50	3.03	SIL
	SLUKA	90	11.7	SIL
	CHIARA	85	0.71	SIL
	STARBUCK	30	1.82	SIL
	BAHEM	90	15.9	SIL
420	POWER	50	1.41	SIL
	MCCAIN	30	0.84	SIL

	STARBUCK	30	0.64	SIL
	BARRYMORE	50	1.07	SIL
	SLUKA	90	19.33	SIL
	POWER	85	45.45	SIL
421	POWER	50	64.69	SIL
	MCCAIN	30	38.82	SIL
422dc	POWER	50	53.7	SIL
	MCCAIN	30	32.22	SIL
422p	POWER	50	67.7	SIL
	MCCAIN	30	40.62	SIL
423 &424	STARBUCK	30	0.84	SIL
	POWER	85	62.52	SIL
	POWER	50	6.79	SIL
	MCCAIN	30	4.07	SIL
	BARRYMORE	50	1.4	SIL
	TULCH	90	39	SIL
430	POWER	85	23.74	SIL
	STARBUCK	30	2	SIL
	BARRYMORE	50	3.33	SIL
	SLUKA	90	111.02	SIL
	SHANO	85	0.47	SIL
431	SHANO	85	5.45	SIL
	SLUKA	90	90.84	SIL
432dry	SLUKA	90	17.23	SIL
	BANBURY	55	3.31	L
	BAHEM	90	1.24	SIL

	ROCK OUTCROP	35	2.11	
432p	BANBURY	55	2.15	L
	SLUKA	90	32.98	SIL
	BAHEM	90	23.77	SIL
	ROCK OUTCROP	35	1.37	
433	SLUKA	90	4.98	SIL
	BAHEM	90	9.13	SIL
434	POWER	85	13.78	SIL
	SLUKA	90	5.3	SIL
435	SHANO	85	0.17	SIL
	STARBUCK	30	3.36	SIL
	SLUKA	90	2.13	SIL
	POWER	85	4.21	SIL
	BARRYMORE	50	5.6	SIL
440	POWER	85	48.85	SIL
440 to 444 dry corners	POWER	85	2944.05	SIL
	POWER	50	9.44	SIL
	MCCAIN	30	5.67	SIL
441	POWER	50	1.02	SIL
	MCCAIN	30	0.61	SIL
	POWER	85	103.28	SIL
442	MCCAIN	30	1.88	SIL
	POWER	50	3.14	SIL
	POWER	85	15.87	SIL
443	POWER	50	15.95	SIL
	POWER	85	58.17	SIL

	MCCAIN	30	9.57	SIL
444	POWER	85	63.73	SIL
	BARRYMORE	50	5.04	SIL
	STARBUCK	30	3.02	SIL
450	MCCAIN	30	32.71	SIL
	WATER	100	9.44	
	POWER	50	54.52	SIL
451	OWINZA	35	2.65	SIL
	WATER	100	0.16	
	MCCAIN	30	22.82	SIL
	POWER	50	38.04	SIL
	POWER	45	3.41	SIL
452	MCCAIN	30	18.35	SIL
	POWER	50	30.58	SIL
	WATER	100	0.44	
500	POWER	85	6.24	SIL
	SLUKA	90	44.58	SIL
501	POWER	85	50.82	SIL
	SLUKA	90	2.07	SIL
502	POWER	85	32.9	SIL
	SLUKA	90	19.49	SIL
503	POWER	85	1.4	SIL
	SLUKA	90	50.95	SIL
504	STARBUCK	30	8.74	SIL
	SLUKA	90	28.72	SIL
	BARRYMORE	50	14.57	SIL

505	BARRYMORE	50	12.64	SIL
	STARBUCK	30	7.58	SIL
	BAHEM	90	32.94	SIL
506	BAHEM	90	32.34	SIL
	STARBUCK	30	3.19	SIL
	SLUKA	90	1.66	SIL
	BARRYMORE	50	5.31	SIL
507	BAHEM	90	38.42	SIL
	BARRYMORE	50	16.02	SIL
	STARBUCK	30	9.61	SIL
601	POWER	85	19.05	SIL
	POWER	50	15.73	SIL
	MCCAIN	30	9.44	SIL
700	SLUKA	90	52.24	SIL
	CHIARA	85	6.48	SIL
701	CHIARA	85	2.63	SIL
	SLUKA	90	20.74	SIL
	ROCK OUTCROP	35	0	
	BANBURY	55	0	L
702	CHIARA	85	14.64	SIL
	SLUKA	90	2.79	SIL
703	STARBUCK	30	0	SIL
	BARRYMORE	50	0.01	SIL
	SLUKA	90	19.66	SIL
Compost Site	CHIARA	85	2.6	SIL
	ROCK OUTCROP	40	12.71	

	BANBURY	30	9.53	L
	PAULVILLE	15	4.77	L
	STARBUCK	30	3.13	SIL
	DOLMAN	90	13.43	SIL
	BARRYMORE	50	5.21	SIL
d1 runoff area	SLUKA	90	1.13	SIL
	TULCH	90	66.22	SIL
	DOLMAN	90	17.39	SIL
d2 ro area	SLUKA	90	1629.27	SIL
	BARRYMORE	50	95.89	SIL
	STARBUCK	30	57.54	SIL
	POWER	85	2944.05	SIL

Table 2 contains important soil characteristics for each of the fields identified in this plan. Each soil characteristic listed is representative for the entire field based on a weighted average. ***(Caution:*** *USDA NRCS Soil Survey information was used to estimate the values reported in Table 2.* ***These are not absolute values*** *and may vary for each specific situation. They are estimated values representative for each field.)* The following includes a brief description of each of those factors:

Dominant Surface Texture -- The predominant texture of the surface layer. Soil texture is the relative proportion, by weight, of the particle separate classes (sand, silt, and clay) finer than 2 mm in equivalent diameter. Soil texture influences engineering works and plant growth and is used as an indicator of how soils formed.

Available Water Capacity (AWC) -- The volume of water that should be available to plants if the soil, inclusive of fragments, were at field capacity. It is commonly defined as the difference between the amount of soil moisture at field capacity and the amount at permanent wilting point. Typical Available Water Capacities are 0.6 inches/foot for a Sand and 2.0 inches/foot for a Silt Loam. Available Water Capacity is an important soil property in developing water budgets, predicting droughtiness, designing and operating irrigation systems, designing drainage systems, protecting water resources, and predicting yields.

Surface Soil Erodibility Factor (K) -- A factor which quantifies the susceptibility of soil detachment by water. Factors vary from a low of 0.02 to a high of 0.64.

Soil Loss Tolerance (T) -- The maximum amount of erosion at which the quality of a soil as a medium for plant growth can be maintained.

Slope -- The difference in elevation between two points expressed as a percentage of the distance between those points.

Permeability -- The quality of the soil that enables water or air to move through it.

Permeability Class -- Permeability expressed by classes ranging from very rapid to impermeable.

Runoff Class - An index of the likelihood for runoff to occur based on inherent soil and slope characteristic. Runoff classes range from Negligible to Very High. Surface pH -- A numerical expression of the relative acidity or alkalinity of the surface soil layer.

Surface pH Classification -- A general descriptive term for soil pH, acid or alkaline.

Table 3 contains additional important soil characteristics for each of the fields identified in this plan. Each soil characteristic listed represents a potential limiting condition within the soil profile (< 5 feet) across the field. ***(Caution:*** *USDA NRCS Soil Survey information was used to estimate the values reported in Table 2.* ***These are not absolute values*** *and may vary for each specific situation. They are estimated values representative for each field.)* The following includes a brief description of each of those factors:

Soil Layer with > 50 % Gravel, Cobble or Stone -- A layer comprised of more than 50 % gravel, cobbles or stones.

Pan - A compact, dense layer in the soil that impedes the movement of water and the growth of roots. Examples include: *hardpan, claypan, plowpan*, and *fragipan*.

Rock -- A layer of rock in the soil that impedes the movement of water and the growth of roots.

Seasonal High Water Table -- A seasonal water table that exist near the surface.

Drainage Class - Drainage class identifies the natural drainage condition of the soil. It refers to the frequency and duration of wet periods. Alteration of the water regime by humans, either through drainage or irrigation, is not a consideration unless the alterations have significantly changed the morphology of the soil.

Hydrologic Group -- A group of soils having similar runoff potential under similar storm and cover conditions.

Table 2. Soil Characteristics Representative For Each Field

Field Name	Representative For Entire Field (Weighted Average)											
	Dominant Surface Texture & (Acreage)[1]	Total Available Water Capacity to 5 feet (in)	Surface Soil Erodibility Factor - K	Soil Loss Tolerance - T (tons/acre)	Calculated Sheet and Rill Erosion Rate[1] (tons/acre)	Calculated Irrigation Induced Erosion Rate[1] (tons/acre)	Slope (%)	Permeability (in/hour)	Permeability Class[1,2]	Runoff Class[1,3]	Surface pH	Surface pH Classification
100	SIL(127.49)	5.28	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.1	Alkaline
101	SIL(124.46)	5.22	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.1	Alkaline
102	SIL(31.6)	4.26	0.47	2	-1	-1	2.5	1.27	Moderate	L	7.02	Alkaline
103	SIL(31.35)	5.5	0.46	2	-1	-1	2.75	0.98	Moderate	L	7.13	Alkaline
104	SIL(27.46)	8.94	0.43	4	-1	-1	3.39	0.25	Moderately Slow	L	7.45	Alkaline
105	SIL(22.79)	5.41	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.12	Alkaline
106	SIL(12.87)	5.41	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.12	Alkaline
107	SIL(96.02)	5.37	0.49	2	-1	-1	2.53	1.27	Moderate	L	7.12	Alkaline
108	SIL(62.72)	4.91	0.44	2	-1	-1	3.36	1.12	Moderate	L	7.27	Alkaline
109	SIL(59.64)	4.02	0.44	1	-1	-1	4.02	1.23	Moderate	L	7.42	Alkaline
110	SIL(61.29)	5.73	0.48	2	-1	-1	2.58	1.18	Moderate	L	7.15	Alkaline
111	SIL(18.73)	5.41	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.12	Alkaline
112	SIL(10.32)	4.32	0.46	2	-1	-1	3.58	1.27	Moderate	L	7.34	Alkaline
113	SIL(37.19)	5.34	0.49	2	-1	-1	2.5	1.28	Moderate	L	7.11	Alkaline
113dry	SIL(148.63)	4.27	0.47	2	-1	-1	2.52	1.27	Moderate	L	7.02	Alkaline
114	SIL(12.84)	5.41	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.12	Alkaline
115	SIL(128.97)	5.69	0.46	2	-1	-1	2.67	1.01	Moderate	L	7.12	Alkaline
116	L(329)	7.04	0.31	3	-1	-1	3.66	0.4	Moderately Slow	L	7.25	Alkaline
117	L(218.99)	6.33	0.29	3	-1	-1	3.82	0.47	Moderately	L	7.23	Alkaline

									Slow			
118	L(101.13)	5.56	0.34	3	-1	-1	3.69	0.67	Moderate	L	7.27	Alkaline
119	SIL(68.42)	4.3	0.47	2	-1	-1	2.5	1.29	Moderate	L	7.03	Alkaline
130	SIL(127.9)	7.11	0.47	3	-1	-1	3.26	0.87	Moderate	L	7.36	Alkaline
131	SIL(120.58)	6.8	0.47	3	-1	-1	2.8	1.07	Moderate	L	7.23	Alkaline
132	SIL(26.27)	6.47	0.48	3	-1	-1	3.23	0.81	Moderate	L	7.73	Alkaline
133	SIL(25.9)	3.85	0.51	2	-1	-1	3.6	0.82	Moderate	L	7.42	Alkaline
134	SIL(12.52)	7.7	0.46	3	-1	-1	3	0.99	Moderate	L	7.3	Alkaline
140	SIL(93.09)	6.24	0.48	3	-1	-1	2.08	0.99	Moderate	L	7.13	Alkaline
141	SIL(54.46)	5.39	0.48	2	-1	-1	2.58	1.17	Moderate	L	7.13	Alkaline
142	SIL(46.17)	3.08	0.55	1	-1	-1	4.5	0.01	Very Slow	H	7.72	Alkaline
143	SIL(6.59)	3.08	0.55	1	-1	-1	4.45	0.04	Very Slow	H	7.71	Alkaline
144	SIL(84.82)	4.73	0.49	2	-1	-1	3.18	0.84	Moderate	L	7.3	Alkaline
145	SIL(55.27)	5.6	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.16	Alkaline
150c	SIL(14.32)	4.61	0.48	2	-1	-1	2.5	1.27	Moderate	L	7.05	Alkaline
150p	SIL(128.43)	7.41	0.49	3	-1	-1	1.95	0.95	Moderate	L	7.2	Alkaline
152	SIL(74.09)	6.24	0.46	3	-1	-1	2.5	1.27	Moderate	L	7.43	Alkaline
153	SIL(77.56)	7.2	0.46	3	-1	-1	2.5	1.28	Moderate	L	7.49	Alkaline
154	FSL(14.78)	5.65	0.36	3	-1	-1	2.5	2.65	Moderately Rapid	LV	7.38	Alkaline
155	SIL(40.82)	5.36	0.49	2	-1	-1	2.5	1.27	Moderate	L	7.11	Alkaline
200	SIL(125.41)	8.69	0.44	5	-1	-1	2.5	1.27	Moderate	L	7.85	Alkaline
200c	SIL(26.56)	8.44	0.44	5	-1	-1	2.5	1.28	Moderate	L	7.82	Alkaline
201	SIL(121.55)	9.68	0.43	5	-1	-1	2.5	1.27	Moderate	L	7.98	Alkaline
201c	SIL(22.43)	9.68	0.43	5	-1	-1	2.5	1.27	Moderate	L	7.98	Alkaline
202	SIL(125.59)	9.2	0.43	5	-1	-1	2.5	1.27	Moderate	L	7.91	Alkaline
202c	SIL(33.41)	8.74	0.44	5	-1	-1	2.5	1.28	Moderate	L	7.85	Alkaline
203	SIL(60.54)	4.31	0.47	2	-1	-1	2.5	1.28	Moderate	L	7.04	Alkaline

203c	SIL(18.47)	6.17	0.45	3	-1	-1	2.5	1.27	Moderate	L	7.37	Alkaline
204	SIL(64.15)	4.77	0.46	2	-1	-1	2.5	1.27	Moderate	L	7.12	Alkaline
204c	SIL(18.18)	6.76	0.45	3	-1	-1	2.5	1.28	Moderate	L	7.47	Alkaline
205	SIL(145.72)	9.32	0.43	5	-1	-1	2.5	1.28	Moderate	L	7.92	Alkaline
206	SIL(116.61)	4.23	0.47	2	-1	-1	2.5	1.28	Moderate	L	7.01	Alkaline
206ec	SIL(1938.34)	4.14	0.47	2	-1	-1	2.5	1.27	Moderate	L	7	Acid
206wc	SIL(17.55)	6.18	0.47	3	-1	-1	2.5	1.27	Moderate	L	7.04	Alkaline
207	SIL(51.95)	9.63	0.48	4	-1	-1	2.5	1.27	Moderate	L	7	Acid
207c	SIL(24.47)	8	0.48	3	-1	-1	2.5	1.27	Moderate	L	7	Acid
210	SIL(60.31)	3.7	0.49	3	-1	-1	2.5	1.27	Moderate	L	7.2	Alkaline
210hl	SIL(64.23)	8.96	0.44	5	-1	-1	2.5	1.27	Moderate	L	7.89	Alkaline
211	SIL(101.62)	2.87	0.13	1	-1	-1	0.74	0.38	Moderately Slow	N	7.98	Alkaline
300	SIL(129.52)	7.8	0.44	4	-1	-1	2.5	1.28	Moderate	L	7.65	Alkaline
301	SIL(107.05)	5.06	0.47	2	-1	-1	2.5	1.28	Moderate	L	7	Acid
302a	SIL(13.59)	4.14	0.47	2	-1	-1	2.5	1.27	Moderate	L	7	Acid
303a	SIL(15.6)	4.14	0.47	2	-1	-1	2.5	1.27	Moderate	L	7	Acid
304	SIL(108.14)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
305	SIL(104.16)	8.46	0.45	4	-1	-1	3.48	0.35	Moderately Slow	L	7.36	Alkaline
306	SIL(117.27)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
307	SIL(67.4)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
308	SIL(57.82)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
309	SIL(21.4)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
400	SIL(130.36)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline

400 401 dry corners	SIL(71.27)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
401	SIL(60.22)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
402	SIL(97.62)	6.71	0.46	4	-1	-1	2.61	1.17	Moderate	L	7.62	Alkaline
402c	SIL(78.88)	7.87	0.44	4	-1	-1	3.15	1.03	Moderate	L	7.57	Alkaline
404	SIL(59.7)	6.46	0.46	4	-1	-1	2.9	1.25	Moderate	L	7.59	Alkaline
405	SIL(39.11)	6.56	0.46	4	-1	-1	2.54	1.25	Moderate	L	7.54	Alkaline
420	SIL(79.9)	8.47	0.45	4	-1	-1	2.54	0.65	Moderate	L	7.27	Alkaline
421	SIL(129.39)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
422dc	SIL(111.44)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
422p	SIL(133.15)	8.26	0.45	4	-1	-1	3.5	0.39	Moderately Slow	L	7.33	Alkaline
423 &424	SIL(133.24)	10.23	0.45	5	-1	-1	2.11	0.41	Moderately Slow	L	7.27	Alkaline
430	SIL(158.5)	4.96	0.48	3	-1	-1	2.5	1.12	Moderate	L	7.21	Alkaline
431	SIL(107.34)	4.18	0.49	3	-1	-1	2.5	1.27	Moderate	L	7.19	Alkaline
432dry	SIL(20.17)	3.68	0.45	3	-1	-1	4.35	1.27	Moderate	L	7.29	Alkaline
432p	SIL(63.06)	5.98	0.46	4	-1	-1	3	1.27	Moderate	L	7.52	Alkaline
433	SIL(12.69)	7.81	0.45	4	-1	-1	2.5	1.27	Moderate	L	7.74	Alkaline
434	SIL(41.85)	9.11	0.44	5	-1	-1	2.5	0.58	Moderately Slow	L	7.28	Alkaline
435	SIL(18.92)	5.85	0.46	3	-1	-1	2.5	1.04	Moderate	L	7.11	Alkaline
440	SIL(57.47)	10.59	0.43	5	-1	-1	2.5	0.39	Moderately Slow	L	7.3	Alkaline
440 to 444 dry corners	SIL(3486.28)	10.59	0.43	5	-1	-1	2.51	0.39	Moderately Slow	L	7.3	Alkaline
441	SIL(123.55)	10.56	0.43	5	-1	-1	2.52	0.39	Moderately Slow	L	7.3	Alkaline

442	SIL(24.94)	10.01	0.44	5	-1	-1	2.75	0.39	Moderately Slow	L	7.31	Alkaline
443	SIL(100.33)	9.86	0.44	5	-1	-1	2.82	0.39	Moderately Slow	L	7.31	Alkaline
444	SIL(85.06)	9.82	0.43	5	-1	-1	2.5	0.49	Moderately Slow	L	7.27	Alkaline
450	SIL(109.04)	7.6	0.42	4	-1	-1	3.22	0.36	Moderately Slow	L	7.33	Alkaline
451	SIL(92.41)	8.28	0.45	4	-1	-1	3.47	0.37	Moderately Slow	L	7.34	Alkaline
452	(0)	0	0	0	-1	-1	0	0	Very Slow	M	-1	Acid
500	SIL(56.87)	4.58	0.48	3	-1	-1	2.5	1.16	Moderate	L	7.21	Alkaline
501	SIL(62.09)	10.32	0.43	5	-1	-1	2.5	0.42	Moderately Slow	L	7.3	Alkaline
502	SIL(60.35)	8.12	0.45	4	-1	-1	2.5	0.71	Moderate	L	7.26	Alkaline
503	SIL(58.25)	3.9	0.49	3	-1	-1	2.5	1.25	Moderate	L	7.2	Alkaline
504	SIL(61.05)	3.91	0.48	2	-1	-1	2.5	1.27	Moderate	L	7.11	Alkaline
505	SIL(61.88)	7.41	0.45	4	-1	-1	2.5	1.28	Moderate	L	7.58	Alkaline
506	SIL(48.41)	8.24	0.44	4	-1	-1	2.5	1.28	Moderate	L	7.74	Alkaline
507	SIL(74.73)	7.31	0.45	4	-1	-1	2.5	1.27	Moderate	L	7.56	Alkaline
601	SIL(62.36)	9.38	0.44	4	-1	-1	3.02	0.39	Moderately Slow	L	7.32	Alkaline
700	SIL(78.11)	3.63	0.5	3	-1	-1	2.7	1.15	Moderate	L	7.25	Alkaline
701	SIL(26.14)	3.63	0.5	3	-1	-1	2.74	1.12	Moderate	L	7.26	Alkaline
702	SIL(21.01)	3.16	0.54	1	-1	-1	4.17	0.22	Moderately Slow	L	7.64	Alkaline
703	SIL(22.46)	3.7	0.49	3	-1	-1	2.5	1.28	Moderate	L	7.2	Alkaline
Compost Site	SIL(50.4)	5.85	0.38	2	-1	-1	3.21	0.8	Moderate	L	7.17	Alkaline
d1 runoff area	SIL(94.15)	9.49	0.49	4	-1	-1	1.33	0.58	Moderately Slow	L	7.19	Alkaline
d2 ro area	SIL(5465.67)	8.08	0.45	4	-1	-1	2.5	0.71	Moderate	L	7.26	Alkaline

NOTES:

1 - PERMEABILITY CLASSES: VR = Very Rapid, R = Rapid, MR = Moderately Rapid, M = Moderate, MS = Moderately Slow, S = Slow, VS = Very Slow, I = Impermeable.

2 - RUNOFF CLASS: N = Negligible, LV = Very Low, L = Low, M = Medium, H = High, HV = Very High.

TABLE 3. SOIL CHARACTERISTICS THAT REPRESENT A POTENTIAL LIMITING CONDITION WITHIN THE SOIL PROFILE (< 5 FEET) ACROSS THE ENTIRE FIELD.

Field Name	Depth to Limiting Layer < 5 feet - Soil Layer with > 50 % Gravel, Cobble or Stone					Depth to Limiting Layer < 5 feet - Pan[1]				
	Dominant Condition		Most Limiting Condition			Dominant Condition		Most Limiting Condition		
	Layer Description[1,2]	Acres	Layer Description[1,2]	Acres	Minimum Depth (in)	Layer Description	Acres	Layer Description	Acres	Minimum Depth (in)
100	None Present	127.49		127.49	0	No Pan Present	127.49	No Pan Present	127.49	0
101	None Present	124.46		124.46	0	No Pan Present	124.46	No Pan Present	124.46	0
102	None Present	31.6		31.6	0	Pan Present	31.6	Pan Present	31.6	0
103	None Present	31.35		31.35	0	Pan Present	31.35	Pan Present	31.35	0
104	None Present	27.46		27.46	0	Pan Present	27.46	Pan Present	27.46	0
105	None Present	22.79		22.79	0	Pan Present	22.79	Pan Present	22.79	0
106	None Present	12.87		12.87	0	Pan Present	12.87	Pan Present	12.87	0
107	None Present	96.02		96.02	0	No Pan Present	96.02	No Pan Present	96.02	0
108	None Present	70.42		70.42	0	No Pan Present	62.67	Pan Present	11.61	20
109	None Present	61.42		61.42	0	No Pan Present	62.3	No Pan Present	62.3	0
110	None Present	61.29		61.29	0	No Pan Present	61.29	No Pan Present	61.29	0
111	None Present	18.73		18.73	0	Pan Present	18.73	Pan Present	18.73	0
112	None Present	10.32		10.32	0	Pan Present	10.32	Pan Present	10.32	0
113	None Present	37.19		37.19	0	Pan Present	37.19	Pan Present	37.19	0
113dry	None Present	148.63		148.63	0	No Pan Present	148.63	No Pan Present	148.63	0
114	None Present	12.84		12.84	0	Pan Present	12.84	Pan Present	12.84	0
115	None Present	130.15		130.15	0	No Pan Present	130.74	No Pan Present	130.74	0
116	None Present	380.71		380.71	0	No Pan Present	490.38	No Pan Present	490.38	0
117	None Present	203.94		203.94	0	No Pan	256.98	Pan Present	19.95	20

						Present				
118	None Present	137.16		137.16	0	No Pan Present	122	Pan Present	48.88	20
119	None Present	68.68		68.68	0	No Pan Present	68.68	No Pan Present	68.68	0
130	None Present	127.9		127.9	0	No Pan Present	115.47	Pan Present	12.44	20
131	None Present	120.58		120.58	0	No Pan Present	117.25	Pan Present	3.33	20
132	None Present	26.27		26.27	0	Pan Present	26.26	Pan Present	0.01	20
133	None Present	25.9		25.9	0	Pan Present	17.03	Pan Present	8.87	20
134	None Present	12.52		12.52	0	Pan Present	12.52	Pan Present	12.52	0
140	None Present	93.09		93.09	0	No Pan Present	73.21	Pan Present	19.87	20
141	None Present	54.46		54.46	0	Pan Present	54.46	Pan Present	54.46	0
142	None Present	46.33		46.33	0	Pan Present	46.41	Pan Present	46.41	0
143	None Present	6.59		6.59	0	Pan Present	6.59	Pan Present	6.59	0
144	None Present	88.06		88.06	0	No Pan Present	89.69	No Pan Present	89.69	0
145	None Present	55.27		55.27	0	Pan Present	55.27	Pan Present	55.27	0
150c	None Present	14.32		14.32	0	Pan Present	14.32	Pan Present	14.32	0
150p	None Present	128.43		128.43	0	No Pan Present	119.91	Pan Present	8.52	20
152	None Present	74.09		74.09	0	Pan Present	59.53	Pan Present	14.57	20
153	None Present	77.56		77.56	0	No Pan Present	77.56	No Pan Present	77.56	0
154	None Present	29.2		29.2	0	Pan Present	29.2	Pan Present	29.2	0
155	None Present	40.82		40.82	0	Pan Present	40.82	Pan Present	40.82	0
200	None Present	125.41		125.41	0	No Pan Present	104.58	Pan Present	20.83	20
200c	None Present	26.56		26.56	0	Pan Present	21.04	Pan Present	5.52	20
201	None Present	121.55		121.55	0	No Pan Present	121.55	No Pan Present	121.55	0
201c	None Present	22.43		22.43	0	Pan Present	22.43	Pan Present	22.43	0
202	None Present	125.59		125.59	0	No Pan	119.06	Pan Present	6.54	20

						Present				
202c	None Present	33.41		33.41	0	Pan Present	29.75	Pan Present	3.66	20
203	None Present	60.54		60.54	0	No Pan Present	60.54	No Pan Present	60.54	0
203c	None Present	18.47		18.47	0	Pan Present	17.92	Pan Present	0.55	20
204	None Present	64.15		64.15	0	No Pan Present	64.15	No Pan Present	64.15	0
204c	None Present	18.18		18.18	0	Pan Present	18.18	Pan Present	18.18	0
205	None Present	145.72		145.72	0	No Pan Present	145.72	No Pan Present	145.72	0
206	None Present	116.61		116.61	0	No Pan Present	116.61	No Pan Present	116.61	0
206ec	None Present	1938.34		1938.34	0	No Pan Present	1938.34	No Pan Present	1938.34	0
206wc	None Present	17.55		17.55	0	Pan Present	17.55	Pan Present	17.55	0
207	None Present	51.95		51.95	0	Pan Present	51.95	Pan Present	51.95	0
207c	None Present	24.47		24.47	0	Pan Present	24.47	Pan Present	24.47	0
210	None Present	60.31		60.31	0	No Pan Present	60.31	No Pan Present	60.31	20
210hl	None Present	64.23		64.23	0	Pan Present	56.4	Pan Present	7.82	20
211	None Present	101.62		101.62	0	No Pan Present	101.62	No Pan Present	101.62	0
300	None Present	129.52		129.52	0	No Pan Present	129.52	No Pan Present	129.52	0
301	None Present	107.05		107.05	0	No Pan Present	107.05	No Pan Present	107.05	0
302a	None Present	13.59		13.59	0	Pan Present	13.59	Pan Present	13.59	0
303a	None Present	15.6		15.6	0	Pan Present	15.6	Pan Present	15.6	0
304	None Present	108.14		108.14	0	No Pan Present	108.14	No Pan Present	108.14	0
305	None Present	104.16		104.16	0	No Pan Present	104.16	No Pan Present	104.16	0
306	None Present	117.27		117.27	0	No Pan Present	117.27	No Pan Present	117.27	0
307	None Present	67.4		67.4	0	No Pan Present	67.4	No Pan Present	67.4	0

308	None Present	57.82		57.82	0	Pan Present	57.82	Pan Present	57.82	0
309	None Present	21.4		21.4	0	Pan Present	21.4	Pan Present	21.4	0
400	None Present	130.36		130.36	0	No Pan Present	130.36	No Pan Present	130.36	0
400 401 dry corners	None Present	71.27		71.27	0	No Pan Present	71.27	No Pan Present	71.27	0
401	None Present	60.22		60.22	0	No Pan Present	60.22	No Pan Present	60.22	0
402	None Present	97.62		97.62	0	Pan Present	56.32	Pan Present	41.29	20
402c	None Present	89.68		89.68	0	No Pan Present	73.25	Pan Present	16.43	20
404	None Present	62.42		62.42	0	Pan Present	33.26	Pan Present	29.15	20
405	None Present	39.11		39.11	0	Pan Present	26.02	Pan Present	13.08	20
420	None Present	79.9		79.9	0	Pan Present	58.42	Pan Present	21.47	20
421	None Present	129.39		129.39	0	No Pan Present	129.39	No Pan Present	129.39	0
422dc	None Present	111.44		111.44	0	No Pan Present	111.44	No Pan Present	111.44	0
422p	None Present	133.15		133.15	0	No Pan Present	133.15	No Pan Present	133.15	0
423 &424	None Present	133.24		133.24	0	No Pan Present	133.24	No Pan Present	133.24	0
430	None Present	158.5		158.5	0	No Pan Present	123.36	No Pan Present	123.36	20
431	None Present	107.34		107.34	0	No Pan Present	100.93	No Pan Present	100.93	20
432dry	None Present	25.77		25.77	0	Pan Present	18.8	Pan Present	18.8	20
432p	None Present	66.97		66.97	0	Pan Present	36.65	Pan Present	36.65	20
433	None Present	12.69		12.69	0	Pan Present	8.72	Pan Present	3.97	20
434	None Present	41.85		41.85	0	Pan Present	32.86	Pan Present	8.99	20
435	None Present	18.92		18.92	0	Pan Present	16.55	Pan Present	2.37	20
440	None Present	57.47		57.47	0	Pan Present	57.47	Pan Present	57.47	0
440 to 444 dry corners	None Present	3486.28		3486.28	0	No Pan Present	3486.28	No Pan Present	3486.28	0
441	None Present	123.55		123.55	0	No Pan Present	123.55	No Pan Present	123.55	0

442	None Present	24.94		24.94	0	Pan Present	24.94	Pan Present	24.94	0
443	None Present	100.33		100.33	0	No Pan Present	100.33	No Pan Present	100.33	0
444	None Present	85.06		85.06	0	No Pan Present	85.06	No Pan Present	85.06	0
450	None Present	109.04		109.04	0	No Pan Present	109.04	No Pan Present	109.04	0
451	None Present	92.41		92.41	0	No Pan Present	92.41	No Pan Present	92.41	0
452		0	No soil data	0	0	No Pan Present	0	No Pan Present	0	0
500	None Present	56.87		56.87	0	Pan Present	49.53	Pan Present	49.53	20
501	None Present	62.09		62.09	0	Pan Present	59.79	Pan Present	2.3	20
502	None Present	60.35		60.35	0	Pan Present	38.7	Pan Present	21.65	20
503	None Present	58.25		58.25	0	Pan Present	56.61	Pan Present	56.61	20
504	None Present	61.05		61.05	0	Pan Present	31.91	Pan Present	31.91	20
505	None Present	61.88		61.88	0	No Pan Present	61.88	No Pan Present	61.88	0
506	None Present	48.41		48.41	0	Pan Present	46.57	Pan Present	1.84	20
507	None Present	74.73		74.73	0	No Pan Present	74.73	No Pan Present	74.73	0
601	None Present	62.36		62.36	0	No Pan Present	62.36	No Pan Present	62.36	0
700	None Present	78.11		78.11	0	No Pan Present	70.48	No Pan Present	70.48	20
701	None Present	26.14		26.14	0	Pan Present	23.05	Pan Present	23.05	20
702	None Present	21.01		21.01	0	Pan Present	17.51	Pan Present	3.51	20
703	None Present	22.46		22.46	0	Pan Present	22.46	Pan Present	22.46	20
Compost Site	None Present	76.07		76.07	0	No Pan Present	88.9	No Pan Present	88.9	0
d1 runoff area	None Present	94.15		94.15	0	No Pan Present	92.89	Pan Present	1.25	20
d2 ro area	None Present	5465.67		5465.67	0	No Pan Present	3655.38	No Pan Present	1810.3	20

Field Name	Depth to Limiting Layer < 5 feet - Rock					Depth to Limiting Layer < 5 feet - Seasonal High Water Table				
	Dominant Condition		Most Limiting Condition			Dominant Condition		Most Limiting Condition		
	Layer Description	Acres	Layer Description	Acres	Minimum Depth (in)	Layer Description	Acres	Layer Description	Acres	Minimum Depth (in)
100	No Rock Layer Present	112.55	No Rock Layer Present	5.6	N/A	No Water Table Present	127.49	No Water Table Present	127.49	6
101	No Rock Layer Present	107.14	No Rock Layer Present	6.5	N/A	No Water Table Present	124.46	No Water Table Present	124.46	6
102	Rock Layer Present	28.41	Rock Layer Present	10.65	12	Water Table Present	31.6	Water Table Present	31.6	6
103	Rock Layer Present	22.65	Rock Layer Present	8.49	12	Water Table Present	31.35	Water Table Present	31.35	6
104	No Rock Layer Present	26.84	No Rock Layer Present	0.23	N/A	Water Table Present	27.46	Water Table Present	27.46	6
105	No Rock Layer Present	22.79	No Rock Layer Present	22.79	N/A	Water Table Present	22.79	Water Table Present	22.79	6
106	No Rock Layer Present	12.87	No Rock Layer Present	12.87	N/A	Water Table Present	12.87	Water Table Present	12.87	6
107	No Rock Layer Present	94.95	No Rock Layer Present	1.07	N/A	No Water Table Present	96.02	No Water Table Present	96.02	6
108	No Rock Layer Present	52.98	No Rock Layer Present	7.7	N/A	No Water Table Present	74.28	No Water Table Present	74.28	6
109	Rock Layer Present	38	Rock Layer Present	1.77	10	No Water Table Present	62.3	No Water Table Present	62.3	6
110	No Rock Layer Present	61.29	No Rock Layer Present	61.29	N/A	No Water Table Present	61.29	No Water Table Present	61.29	6
111	No Rock Layer Present	18.73	No Rock Layer Present	18.73	N/A	Water Table Present	18.73	Water Table Present	18.73	6
112	No Rock Layer Present	5.88	No Rock Layer Present	4.44	N/A	Water Table Present	10.32	Water Table Present	10.32	6
113	No Rock Layer Present	35.23	No Rock Layer Present	0.73	N/A	Water Table Present	37.19	Water Table Present	37.19	6
113dry	Rock Layer Present	131.13	Rock Layer Present	49.17	12	No Water Table Present	148.63	No Water Table Present	148.63	6
114	No Rock Layer Present	12.84	No Rock Layer Present	12.84	N/A	Water Table Present	12.84	Water Table Present	12.84	6
115	Rock Layer Present	85.11	Rock Layer Present	1.18	10	No Water Table Present	130.74	No Water Table Present	130.74	6
116	Rock Layer	249.38	Rock Layer	219.33	10	No Water	490.38	No Water	490.38	6

	Present		Present			Table Present		Table Present		
117	Rock Layer Present	181.59	Rock Layer Present	145.99	10	No Water Table Present	276.93	No Water Table Present	276.93	6
118	Rock Layer Present	88.29	Rock Layer Present	67.42	10	No Water Table Present	170.87	No Water Table Present	170.87	6
119	Rock Layer Present	66.57	Rock Layer Present	24.96	12	No Water Table Present	68.68	No Water Table Present	68.68	6
130	No Rock Layer Present	127.9	No Rock Layer Present	127.9	N/A	No Water Table Present	127.9	No Water Table Present	127.9	6
131	No Rock Layer Present	120.58	No Rock Layer Present	120.58	N/A	No Water Table Present	120.58	No Water Table Present	120.58	6
132	No Rock Layer Present	26.27	No Rock Layer Present	0	N/A	Water Table Present	26.27	Water Table Present	26.27	6
133	No Rock Layer Present	23.92	No Rock Layer Present	0.74	N/A	Water Table Present	25.9	Water Table Present	25.9	6
134	No Rock Layer Present	12.52	No Rock Layer Present	12.52	N/A	Water Table Present	12.52	Water Table Present	12.52	6
140	No Rock Layer Present	58.53	No Rock Layer Present	12.96	N/A	No Water Table Present	93.09	No Water Table Present	93.09	6
141	No Rock Layer Present	43.18	No Rock Layer Present	4.23	N/A	Water Table Present	54.46	Water Table Present	54.46	6
142	No Rock Layer Present	46.25	No Rock Layer Present	0.16	N/A	Water Table Present	46.41	Water Table Present	46.41	6
143	No Rock Layer Present	6.41	No Rock Layer Present	0.07	N/A	Water Table Present	6.59	Water Table Present	6.59	6
144	No Rock Layer Present	82.88	No Rock Layer Present	3.25	N/A	No Water Table Present	89.69	No Water Table Present	89.69	6
145	No Rock Layer Present	55.27	No Rock Layer Present	55.27	N/A	Water Table Present	55.27	Water Table Present	55.27	6
150c	Rock Layer Present	9.03	Rock Layer Present	3.39	12	Water Table Present	14.32	Water Table Present	14.32	6
150p	No Rock Layer Present	126.5	No Rock Layer Present	0.72	N/A	No Water Table Present	128.43	No Water Table Present	128.43	6
152	No Rock Layer Present	43.91	No Rock Layer Present	11.32	N/A	No Water Table Present	74.09	No Water Table Present	74.09	6
153	No Rock Layer Present	70.97	No Rock Layer Present	2.47	N/A	No Water Table Present	77.56	No Water Table Present	77.56	6
154	No Rock Layer Present	21.16	No Rock Layer Present	3.02	N/A	Water Table Present	29.2	Water Table Present	29.2	6
155	No Rock Layer	39.54	No Rock Layer	0.48	N/A	Water Table	40.82	Water Table	40.82	6

	Present		Present			Present		Present		
200	No Rock Layer Present	125.41	No Rock Layer Present	125.41	N/A	No Water Table Present	125.41	No Water Table Present	125.41	6
200c	No Rock Layer Present	26.56	No Rock Layer Present	26.56	N/A	Water Table Present	26.56	Water Table Present	26.56	6
201	No Rock Layer Present	121.55	No Rock Layer Present	121.55	N/A	No Water Table Present	121.55	No Water Table Present	121.55	6
201c	No Rock Layer Present	22.43	No Rock Layer Present	22.43	N/A	Water Table Present	22.43	Water Table Present	22.43	6
202	No Rock Layer Present	121.94	No Rock Layer Present	1.37	N/A	No Water Table Present	125.59	No Water Table Present	125.59	6
202c	No Rock Layer Present	31.62	No Rock Layer Present	0.67	N/A	Water Table Present	33.41	Water Table Present	33.41	6
203	Rock Layer Present	58.64	Rock Layer Present	21.99	12	No Water Table Present	60.54	No Water Table Present	60.54	6
203c	Rock Layer Present	11.06	Rock Layer Present	4.15	12	Water Table Present	18.47	Water Table Present	18.47	6
204	Rock Layer Present	56.67	Rock Layer Present	21.25	12	No Water Table Present	64.15	No Water Table Present	64.15	6
204c	Rock Layer Present	9.58	Rock Layer Present	3.59	12	Water Table Present	18.18	Water Table Present	18.18	6
205	No Rock Layer Present	136.38	No Rock Layer Present	3.5	N/A	No Water Table Present	145.72	No Water Table Present	145.72	6
206	Rock Layer Present	115.06	Rock Layer Present	43.15	12	No Water Table Present	116.61	No Water Table Present	116.61	6
206ec	Rock Layer Present	1938.19	Rock Layer Present	726.82	12	No Water Table Present	1938.34	No Water Table Present	1938.34	6
206wc	Rock Layer Present	12.78	Rock Layer Present	4.79	12	Water Table Present	17.55	Water Table Present	17.55	6
207	No Rock Layer Present	36.27	No Rock Layer Present	5.88	N/A	Water Table Present	51.95	Water Table Present	51.95	6
207c	Rock Layer Present	12.47	Rock Layer Present	4.66	12	Water Table Present	24.47	Water Table Present	24.47	6
210	No Rock Layer Present	60.31	No Rock Layer Present	60.31	N/A	No Water Table Present	60.31	No Water Table Present	60.31	6
210hl	No Rock Layer Present	64.23	No Rock Layer Present	64.23	N/A	No Water Table Present	64.23	No Water Table Present	64.23	6
211	No Rock Layer Present	101.62	No Rock Layer Present	101.62	N/A	No Water Table Present	101.62	No Water Table Present	101.62	6
300	No Rock Layer	85.76	No Rock Layer	16.41	N/A	No Water	129.52	No Water	129.52	6

	Present		Present			Table Present		Table Present		
301	Rock Layer Present	94.35	Rock Layer Present	35.38	12	No Water Table Present	107.05	No Water Table Present	107.05	6
302a	Rock Layer Present	13.59	Rock Layer Present	5.09	12	Water Table Present	13.59	Water Table Present	13.59	6
303a	Rock Layer Present	15.6	Rock Layer Present	5.85	12	Water Table Present	15.6	Water Table Present	15.6	6
304	No Rock Layer Present	67.59	No Rock Layer Present	40.55	N/A	No Water Table Present	108.14	No Water Table Present	108.14	6
305	No Rock Layer Present	73.9	No Rock Layer Present	30.26	N/A	No Water Table Present	104.16	No Water Table Present	104.16	6
306	No Rock Layer Present	73.3	No Rock Layer Present	43.98	N/A	No Water Table Present	117.27	No Water Table Present	117.27	6
307	No Rock Layer Present	42.12	No Rock Layer Present	25.27	N/A	No Water Table Present	67.4	No Water Table Present	67.4	6
308	No Rock Layer Present	36.14	No Rock Layer Present	21.68	N/A	Water Table Present	57.82	Water Table Present	57.82	6
309	No Rock Layer Present	13.37	No Rock Layer Present	8.02	N/A	Water Table Present	21.4	Water Table Present	21.4	6
400	No Rock Layer Present	81.48	No Rock Layer Present	48.89	N/A	No Water Table Present	130.36	No Water Table Present	130.36	6
400 401 dry corners	No Rock Layer Present	44.53	No Rock Layer Present	0.01	N/A	No Water Table Present	71.27	No Water Table Present	71.27	6
401	No Rock Layer Present	37.64	No Rock Layer Present	22.58	N/A	No Water Table Present	60.22	No Water Table Present	60.22	6
402	No Rock Layer Present	97.62	No Rock Layer Present	97.62	N/A	No Water Table Present	97.62	No Water Table Present	97.62	6
402c	No Rock Layer Present	78.88	No Rock Layer Present	10.8	N/A	No Water Table Present	89.68	No Water Table Present	89.68	6
404	No Rock Layer Present	59.7	No Rock Layer Present	2.71	N/A	No Water Table Present	62.42	No Water Table Present	62.42	6
405	No Rock Layer Present	32.16	No Rock Layer Present	2.6	N/A	Water Table Present	39.11	Water Table Present	39.11	6
420	No Rock Layer Present	76.7	No Rock Layer Present	0.8	N/A	No Water Table Present	79.9	No Water Table Present	79.9	6
421	No Rock Layer Present	80.87	No Rock Layer Present	48.52	N/A	No Water Table Present	129.39	No Water Table Present	129.39	6
422dc	No Rock Layer Present	69.65	No Rock Layer Present	41.79	N/A	No Water Table Present	111.44	No Water Table Present	111.44	6
422p	No Rock Layer	83.22	No Rock Layer	49.93	N/A	No Water	133.15	No Water	133.15	6

	Present		Present			Table Present		Table Present		
423 &424	No Rock Layer Present	125.36	No Rock Layer Present	1.05	N/A	No Water Table Present	133.24	No Water Table Present	133.24	6
430	No Rock Layer Present	151.84	No Rock Layer Present	2.5	N/A	No Water Table Present	158.5	No Water Table Present	158.5	6
431	No Rock Layer Present	107.34	No Rock Layer Present	107.34	N/A	No Water Table Present	107.34	No Water Table Present	107.34	6
432dry	No Rock Layer Present	20.17	No Rock Layer Present	5.6	N/A	Water Table Present	25.77	Water Table Present	25.77	6
432p	No Rock Layer Present	63.06	No Rock Layer Present	3.9	N/A	No Water Table Present	66.97	No Water Table Present	66.97	6
433	No Rock Layer Present	12.69	No Rock Layer Present	12.69	N/A	Water Table Present	12.69	Water Table Present	12.69	6
434	No Rock Layer Present	41.85	No Rock Layer Present	41.85	N/A	Water Table Present	41.85	Water Table Present	41.85	6
435	Rock Layer Present	11.39	Rock Layer Present	4.27	12	Water Table Present	18.92	Water Table Present	18.92	6
440	No Rock Layer Present	57.47	No Rock Layer Present	57.47	N/A	Water Table Present	57.47	Water Table Present	57.47	6
440 to 444 dry corners	No Rock Layer Present	3477.77	No Rock Layer Present	8.51	N/A	No Water Table Present	3486.28	No Water Table Present	3486.28	6
441	No Rock Layer Present	122.78	No Rock Layer Present	0.76	N/A	No Water Table Present	123.55	No Water Table Present	123.55	6
442	No Rock Layer Present	22.59	No Rock Layer Present	2.35	N/A	Water Table Present	24.94	Water Table Present	24.94	6
443	No Rock Layer Present	88.37	No Rock Layer Present	11.96	N/A	No Water Table Present	100.33	No Water Table Present	100.33	6
444	No Rock Layer Present	74.98	No Rock Layer Present	3.78	N/A	No Water Table Present	85.06	No Water Table Present	85.06	6
450	No Rock Layer Present	68.15	No Rock Layer Present	40.89	N/A	No Water Table Present	109.04	No Water Table Present	109.04	6
451	No Rock Layer Present	60.59	No Rock Layer Present	31.81	N/A	No Water Table Present	92.41	No Water Table Present	92.41	6
452	No Rock Layer Present	0	No Rock Layer Present	0	N/A	No Water Table Present	0	No Water Table Present	0	0
500	No Rock Layer Present	56.87	No Rock Layer Present	56.87	N/A	Water Table Present	56.87	Water Table Present	56.87	6
501	No Rock Layer Present	62.09	No Rock Layer Present	62.09	N/A	No Water Table Present	62.09	No Water Table Present	62.09	6
502	No Rock Layer	60.35	No Rock Layer	60.35	N/A	No Water	60.35	No Water	60.35	6

	Present		Present			Table Present		Table Present		
503	No Rock Layer Present	58.25	No Rock Layer Present	58.25	N/A	Water Table Present	58.25	Water Table Present	58.25	6
504	No Rock Layer Present	31.91	No Rock Layer Present	10.93	N/A	No Water Table Present	61.05	No Water Table Present	61.05	6
505	No Rock Layer Present	36.6	No Rock Layer Present	9.48	N/A	No Water Table Present	61.88	No Water Table Present	61.88	6
506	No Rock Layer Present	37.78	No Rock Layer Present	3.99	N/A	Water Table Present	48.41	Water Table Present	48.41	6
507	No Rock Layer Present	42.69	No Rock Layer Present	12.01	N/A	No Water Table Present	74.73	No Water Table Present	74.73	6
601	No Rock Layer Present	50.27	No Rock Layer Present	12.09	N/A	No Water Table Present	62.36	No Water Table Present	62.36	6
700	No Rock Layer Present	78.11	No Rock Layer Present	78.11	N/A	No Water Table Present	78.11	No Water Table Present	78.11	6
701	No Rock Layer Present	26.14	No Rock Layer Present	0	N/A	Water Table Present	26.14	Water Table Present	26.14	6
702	No Rock Layer Present	21.01	No Rock Layer Present	21.01	N/A	Water Table Present	21.01	Water Table Present	21.01	6
703	No Rock Layer Present	22.46	No Rock Layer Present	0	N/A	Water Table Present	22.46	Water Table Present	22.46	6
Compost Site	No Rock Layer Present	51.74	No Rock Layer Present	25.67	N/A	No Water Table Present	88.9	No Water Table Present	88.9	6
d1 runoff area	No Rock Layer Present	94.15	No Rock Layer Present	94.15	N/A	No Water Table Present	94.15	No Water Table Present	94.15	6
d2 ro area	No Rock Layer Present	5273.88	No Rock Layer Present	71.92	N/A	No Water Table Present	5465.67	No Water Table Present	5465.67	6

Field Name	Drainage Class[1,3]		Hydrologic Group[1]	
	Dominant Drainage Class	Acres	Dominant Hydrologic Group	Acres
100	Well drained	127.49	C	127.02
101	Well drained	124.46	C	124.46
102	Well drained	31.6	C	31.59
103	Well drained	31.35	C	22.65
104	Well drained	27.46	B	26.84
105	Well drained	22.79	C	22.79
106	Well drained	12.87	C	12.87
107	Well drained	96.02	C	94.95
108	Well drained	74.28	C	49.13
109	Well drained	62.3	D	36.22
110	Well drained	61.29	C	55.86
111	Well drained	18.73	C	18.73
112	Well drained	10.32	C	5.88
113	Well drained	37.19	C	37.19
113dry	Well drained	148.63	C	147.46
114	Well drained	12.84	C	12.84
115	Well drained	130.74	C	95.21
116	Well drained	490.38		329
117	Well drained	276.93		218.99
118	Well drained	170.87		101.13
119	Well drained	68.68	C	66.57
130	Well drained	127.9	C	64.27
131	Well drained	120.58	C	85.55
132	Well drained	26.27	B	11.86
133	Well drained	25.9	C	16.63

134	Well drained	12.52	C	6.67
140	Well drained	93.09	C	63.5
141	Well drained	54.46	C	48.79
142	Well drained	46.41	D	46.17
143	Well drained	6.59	D	6.41
144	Well drained	89.69	C	57.88
145	Well drained	55.27	C	52.71
150c	Well drained	14.32	C	14.32
150p	Well drained	128.43	C	74.88
152	Well drained	74.09	C	44.75
153	Well drained	77.56	C	42.95
154	Well drained	29.2	B	14.78
155	Well drained	40.82	C	40.82
200	Well drained	125.41	B	104.58
200c	Well drained	26.56	B	21.04
201	Well drained	121.55	B	121.55
201c	Well drained	22.43	B	22.43
202	Well drained	125.59	B	115.4
202c	Well drained	33.41	B	27.96
203	Well drained	60.54	C	58.64
203c	Well drained	18.47	C	11.61
204	Well drained	64.15	C	56.67
204c	Well drained	18.18	C	9.58
205	Well drained	145.72	B	136.38
206	Well drained	116.61	C	115.06
206ec	Well drained	1938.34	C	1938.19
206wc	Well drained	17.55	C	12.78
207	Well drained	51.95	B	36.27
207c	Well drained	24.47	C	12.44

210	Well drained	60.31	C	60.31
210hl	Well drained	64.23	B	56.4
211	Well drained	101.62	B	101.62
300	Well drained	129.52	B	85.76
301	Well drained	107.05	C	94.35
302a	Well drained	13.59	C	13.59
303a	Well drained	15.6	C	15.6
304	Well drained	108.14	B	108.14
305	Well drained	104.16	B	104.16
306	Well drained	117.27	B	117.27
307	Well drained	67.4	B	67.4
308	Well drained	57.82	B	57.82
309	Well drained	21.4	B	21.4
400	Well drained	130.36	B	130.36
400 401 dry corners	Well drained	71.27	B	71.24
401	Well drained	60.22	B	60.22
402	Well drained	97.62	B	49.54
402c	Well drained	89.68	B	61.6
404	Well drained	62.42	B	29.47
405	Well drained	39.11	C	20.03
420	Well drained	79.9	B	56.28
421	Well drained	129.39	B	129.39
422dc	Well drained	111.44	B	111.44
422p	Well drained	133.15	B	133.15
423 &424	Well drained	133.24	B	130.45
430	Well drained	158.5	C	130.01
431	Well drained	107.34	C	100.93
432dry	Well drained	25.77	C	18.8
432p	Well drained	66.97	C	36.65

433	Well drained	12.69	B	8.72
434	Well drained	41.85	B	32.86
435	Well drained	18.92	C	13.75
440	Well drained	57.47	B	57.47
440 to 444 dry corners	Well drained	3486.28	B	3486.28
441	Well drained	123.55	B	123.55
442	Well drained	24.94	B	24.94
443	Well drained	100.33	B	100.33
444	Well drained	85.06	B	74.98
450	Well drained	109.04	B	109.04
451	Well drained	92.41	B	92.41
452		0	0	0
500	Well drained	56.87	C	49.53
501	Well drained	62.09	B	59.79
502	Well drained	60.35	B	38.7
503	Well drained	58.25	C	56.61
504	Well drained	61.05	C	61.05
505	Well drained	61.88	B	36.6
506	Well drained	48.41	B	35.94
507	Well drained	74.73	B	42.69
601	Well drained	62.36	B	62.36
700	Well drained	78.11	C	70.48
701	Well drained	26.14	C	23.05
702	Well drained	21.01	D	17.51
703	Well drained	22.46	C	22.46
Compost Site	Well drained	88.9	C	47.79
d1 runoff area	Well drained	94.15	B	73.58
d2 ro area	Well drained	5465.67	B	3463.59

NOTES:

1 - GRAVEL, COBBLE, or STONE: GRV = Very Gravelly, GRX = Extremely Gravelly, CBV = Very Cobbly, CBX = Extremely Cobbly, STV = Very Stony, STX = Extremely Stony, WB = Weathered Bedrock, and UWB =

Unweathered Bedrock.
3 - DRAINAGE CLASS: E = Excessively drained, SE = Somewhat Excessively drained, W = Well drained, MW = Moderately Well drained, SP = Somewhat Poorly drained, P = Poorly drained, VP = Very Poorly drained.

Analysis Of Soil Characteristics Legend

Soil Pan

Hardpan – A hardened or cemented layer soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Claypan – A slowly permeable soil horizon that contains much more clay than the horizon above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Plowpan – A compacted layer formed in the soil directly below the plow layer.

Fragipan – A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restrict roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than deform slowly.

Soil Drainage Class

Excessively drained (E). Water is removed very rapidly. The occurrence of internal free water commonly is very rare or very deep. The soils are commonly coarse-textured and have very high hydraulic conductivity or are very shallow. They are not suited to crop production unless irrigated.

Somewhat excessively drained (SE). Water is removed from the soil rapidly. Internal free water occurrence commonly is very rare or very deep. The soils are commonly coarse-textured and have high saturated hydraulic conductivity or are very shallow. Without irrigation, only a narrow range of crops can be grown and yields are low.

Well drained (W). Water is removed from the soil readily but not rapidly. Internal free water occurrence commonly is deep or very deep; annual duration is not specified. Water is available to plants throughout most of the growing season in humid regions. Wetness does not inhibit growth of roots for significant periods during most growing seasons.

Moderately well drained (MW). Water is removed from the soil somewhat slowly during some periods of the year. Internal free water occurrence commonly is moderately deep and transitory through permanent. The soils are wet for only a short time within the rooting depth during the growing season, but long enough that most mesophytic crops are affected. They commonly have a moderately low or lower saturated hydraulic conductivity in a layer within the upper 1 m, periodically receive high rainfall, or both.

Somewhat poorly drained (SP). Water is removed slowly so that the soil is wet at a shallow depth for significant periods during the growing season. The occurrence of internal free water commonly is shallow to moderately deep and transitory to permanent. Wetness markedly restricts the growth of mesophytic crops, unless artificial drainage is provided. The soils commonly have one or more of

the following characteristics: low or very low saturated hydraulic conductivity, a high water table, additional water from seepage, or nearly continuous rainfall.

Poorly drained (P). Water is removed so slowly that the soil is wet at shallow depths periodically during the growing season or remains wet for long periods. The occurrence of internal free water is shallow or very shallow and common or persistent. Free water is commonly at or near the surface long enough during the growing season so that most mesophytic crops cannot be grown, unless the soil is artificially drained. The soil, however, is not continuously wet directly below plow-depth. Free water at shallow depth is usually present. This water table is commonly the result of low or very low saturated hydraulic conductivity of nearly continuous rainfall, or of a combination of these.

Very poorly drained (VP). Water is removed from the soil so slowly that free water remains at or very near the ground surface during much of the growing season. The occurrence of internal free water is very shallow and persistent or permanent. Unless the soil is artificially drained, most mesophytic crops cannot be grown. The soils are commonly level or depressed and frequently ponded. If rainfall is high or nearly continuous, slope gradients may be greater.

Soil Hydrologic Group

Group A – Soils that have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands and gravels. These soils have a high rate of water transmission (greater than 0.30 in/hr).

Group B – Soils that have moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission (greater than 0.15 – 0.30 in/hr).

Group C – Soils that have low infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. These soils have a low rate of water transmission (greater than 0.05 - 0.15 in/hr).

Group D – Soils that have high runoff potential. They have very low infiltration rates when thoroughly wetted. They consist chiefly of clay soils with high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over impervious material. These soils have a very low rate of water transmission (greater than 0.0 - 0.05 in/hr).

Soil Permeability Class

Very Rapid: 20.0 to 100.0 inches/hour

Rapid: 6.0 to 20.0 inches/hour

Moderately Rapid: 2.0 to 6.0 inches/hour

Moderate:	0.6 to 2.0 inches/hour
Moderately Slow:	0.2 to 0.6 inches/hour
Slow:	0.06 to 0.20 inches
Very Slow:	0.0015 to 0.06 inches/hour
Impermeable:	0.0000 to 0.0015 inches/hour

Soil Texture Modifiers, Texture Class and Terms Used in Lieu of Texture.

Texture Modifiers		Texture Class		Terms used in lieu of texture	
ASHY	Ashy	C	Clay	BR	Bedrock
BY	Bouldery	CL	Clay loam	BY	Boulders
BYV	Very bouldery	COS	Coarse sand	CB	Cobbles
BYX	Extremely bouldery	COSL	Coarse sandy loam	CN	Channers
CB	Cobbly	FS	Fine sand	DUR	Duripan
CBV	Very cobbly	FSL	Fine sandy loam	FL	Flagstones
CBX	Extremely cobbly	L	Loam	G	Gravel
CN	Channery	LCOS	Loamy coarse sand	HPM	Highly Decomposed plant material
CNV	Very channery	LFS	Loamy fine sand	MAT	Material
CNX	Extremely channery	LS	Loamy sand	MPM	Moderately Decomposed plant material
COP	Coprogenous	LVFS	Loamy very fine sand	MPT	Mucky peat
DIA	Diatomaceous	S	Sand	MUCK	Muck
FL	Flaggy	SC	Sandy clay	OR	Ortstein
FLV	Very flaggy	SCL	Sandy clay loam	PBY	Paraboulders
FLX	Extremely flaggy	SI	Silt	PC	Petrocalcic
GR	Gravelly	SIC	Silty clay	PCB	Paracobbles
GRC	Coarse gravelly	SICL	Silty clay loam	PCN	Parachanners
GRF	Fine gravelly	SIL	Silt loam	PEAT	Peat
GRM	Medium gravelly	SL	Sandy loam	PF	Petroferric
GRV	Very gravelly	VFS	Very fine sand	PFL	Paraflagstones
GRX	Extremely gravelly	VFSL	Very fine sandy loam	PG	Paragravel
GS	Grassy			PGP	Petrogypsic
GYP	Gypsiferous			PL	Placic
HB	Herbaceous			PST	Parastones

HYDR	Hydrous
MEDL	Medial
MK	Mucky
MR	Marly
MS	Mossy
PBY	Parabouldery
PBYV	Very Parabouldery
PBYX	Extremely Parabouldery
PCB	Paracobbly
PCBV	Very Paracobbly
PCBX	Extremely Paracobbly
PCN	Parachannery
PCNV	Very Parachannery
PCNX	Extremely Parachannery
PF	Permanently frozen
PFL	Paraflaggy
PFLV	Very Paraflaggy
PFLX	Extremely Paraflaggy
PGR	Paragravelly
PGRV	Very Paragravelly
PGRX	Extremely Paragravelly
PST	Parastony
PSTV	Very Parastony
PSTX	Extremely Parastony
PT	Peaty
ST	Stony
STV	Very stony
SPM	Slightly Decomposed plant material
ST	Stones
W	Water

STX Extremely stony

WD Woody

APPENDIX A. HYDROLOGIC ANALYSIS OF HORIZON ORGANIC DAIRY, PAUL, IDAHO

Run-on entering north side of West Dairy from upstream watershed:The watershed area above the West Dairy is shown in **Figure B1**. This topographic map was created to define the watershed boundary upstream of the entrance of the A and B Irrigation District Main Drain ditch as it entered the north side of the dairy. The boundary was checked with field investigation along most of the watershed boundary. Watershed area was determined to be approximately 50 square miles.

The majority of the watershed area is composed of sagebrush/forb/grass rangeland. Topography is highly variable and contributes to many areas of small-scale runoff storage. The soils vary from significant rock at or near the surface to productive irrigated fields. Watershed slope is greatest on the north end downslope of several buttes and flattens toward the outlet.

In the past, watershed runoff from large winter storm events flowed down the A and B Irrigation District main drain and crossed the E 500 S road between feed storage area 1(FS1) on the dairy and the residence to the east. The nearly flat portion of field 140 just east of the dairy was covered with water. The existing A and B wastewater ditch flowing through the dairy was unable to handle the large volume of runoff water since it was designed to carry only expected drain water. Culvert capacity entering the dairy is about 46 cfs. Downslope culverts vary in capacity but the maximum flow that can pass through the drain is about 50 cfs.

For the purpose of this analysis, the most severe condition for runoff would be in the winter with rain falling on frozen ground. Under this condition, which has occurred in several recent years, almost no water can infiltrate, producing a high ratio of runoff to precipitation. Factors that would tend to reduce runoff volume and peak rate under these conditions are presence of local areas of depression storage due to variable topography and elevated roadbeds with no culverts.

Peak runoff rate was determined using the USDA-NRCS TR55 computer-based hydrologic model. Relevant inputs are watershed area, slopes and roughness of the overland flow, shallow channel and channel flow regions, antecedent soil moisture condition(I, II or III), soil intake index(A, B, C, D) and runoff curve number, based on cover, soil and antecedent moisture. The soils in this area are primarily class C (moderately high runoff potential). For rain on snow or frozen soil conditions, class D (high runoff potential) and antecedent moisture condition III (very wet soil before the event) was used. The 25-year 24-hour storm for this area was 2.0 inches, based on USGS maps. For these conditions, a peak runoff rate of 6100 cfs was calculated. This far exceeds the capacity of the A and B ditch and generally supports the observed flooding events. Therefore, a run-on control structure is proposed to route water above the ditch capacity across E 500 S road. Two berms, shown in **Figure B2**, will be constructed to guide this water through field 140 to a new channel with the entrance south of the current drain ditch. This new channel will allow all run-on water to bypass the dairy lots and lagoons.

Feed Storage 1 (FS1): This site shown in **Figures B2 and B3** is composed of a number of bunker silo trenches excavated into the hillside on the east side of the farm road and several above-ground silage piles on the west side of the road. Amount of run-on water is minimal in both areas since the upslope end is very close to the top of the ridge. Drainage area is 16.1 acres. Runoff from the east portion of the site is collected by an existing berm across the bottom end, as shown in **Figure B3**. This berm should be enlarged and additional berming installed to direct runoff into an existing lagoon at the base of the slope. Runoff water will be temporarily stored until evaporation in an area upslope of the south berm of the new bypass channel.

Feed Storage area 2 (FS2): This site, also shown in **Figures B2and B4**, is located along the western border of the west dairy footprint. Large bales of hay and straw are stored in this area. Drainage area is 18.8 acres. Slope is to the south, and any runoff flows into Lagoon #1. Lagoon storage is adequate. Existing berming should be upgraded to more reliably carry runoff from field 145 to Lagoon #1.

Feed Storage 3 (FS3): This site, located at the north end of the West Dairy, is shown in **Figures B2 and B5**. Drainage area is 6 acres. It slopes to the east and has a has a blacktop surface covering. Runoff is directed by berms along the north and south sides toward the east end, just beyond the hardsurface area. Runoff flows into this low area and into a vertical standpipe from which it is pumped into a liquid transport and emptied into Lagoon 4. For larger storm events, runoff temporarily backs up onto the blacktop apron until it is removed by pumping.

Feed Storage 4 (FS4): is shown in **Figure B6**. It contains metal grain storage bins, a feed mill and liquid feed supplement tanks. It is located adjacent to, and on the south side of the railroad tracks. Because the grain and liquid supplements are in sealed storage, potential for any contamination of surface water on the site is low. Run-on is minimal and runoff will flow from the site to the southwest and into a bermed closed basin area of the adjacent desert.

Feed Storage 5 (FS5): This area, shown in **Figure B6**, is where the baby calf rations are mixed. The milk replacer powder is stored in sealed containers in the building on site. Water and detergent from mix container and feed bottle cleanup goes into an underground storage tank and is then pumped out into the dry corner through one hand line. The daily hydraulic loading due to this small amount of water is applied over a sufficiently large area that no runoff occurs. Should runoff from precipitation ever occur, it will be contained in a natural basin about ¼ mile down-gradient. There should be no animal waste nutrients in this runoff.

North Compost Area

- Site area, square feet (acres): 752,970 (17.3)
- 100- year, 24 hour precipitation, inches: 2.4 inches
- Runoff volume, cubic feet: 150,594

This area, shown in **Figure B7**, slopes to the northwest with an average slope of about 3-4%. It is located so that the top of the site is at the peak of the ridge, nearly eliminating run-on. A small berm (ridge height of 1 ft) will eliminate all possible run-on. The slope flattens at the base, giving a nearly-level area at least 100 feet wide on the west half and at least 50 feet wide on the east half.

Site area is 752,970 square feet. Using 100-year, 24 hour precipitation of 2.4 inches and a runoff coefficient of one (all precipitation runs off the compost area), the required storage is 150,594 cubic feet. Runoff from the east portion is contained by a natural ridge over 3 feet high. The west portion will require a berm with a design height of at least 2.5 feet.

South Compost Area

- Site area, square feet (acres): 2,118,148 (48.6)
- 100- year, 24 hour precipitation, inches: 2.4
- Runoff volume, cubic feet: 423,630

This area, shown in **Figure B8**, slopes to the south, with an average slope of about 2-3%. An upslope band of desert land varying in width from about 200-400 feet contributes run-on to the site. A berm (design height of 1.5 ft in diversion areas with ridge height such that maximum ridge elevation slopes toward the diversion outlet in a nearly uniform slope across one local impoundment area) will eliminate all possible run-on. The slope flattens at the base, giving a nearly-level area at least 100 feet wide. Land area beyond the base to the south is very low slope. Site area is 2,118,148 square feet. Using 100-year, 24 hour precipitation of 2.4 inches and a runoff coefficient of one (all precipitation runs off the compost area), the required storage is 423,630 cubic feet. A berm with a design height ranging from 3.0' (west portion) to 2.5' (middle portion) to 2.0' (east portion) across the base of the slope will be required to contain the runoff.

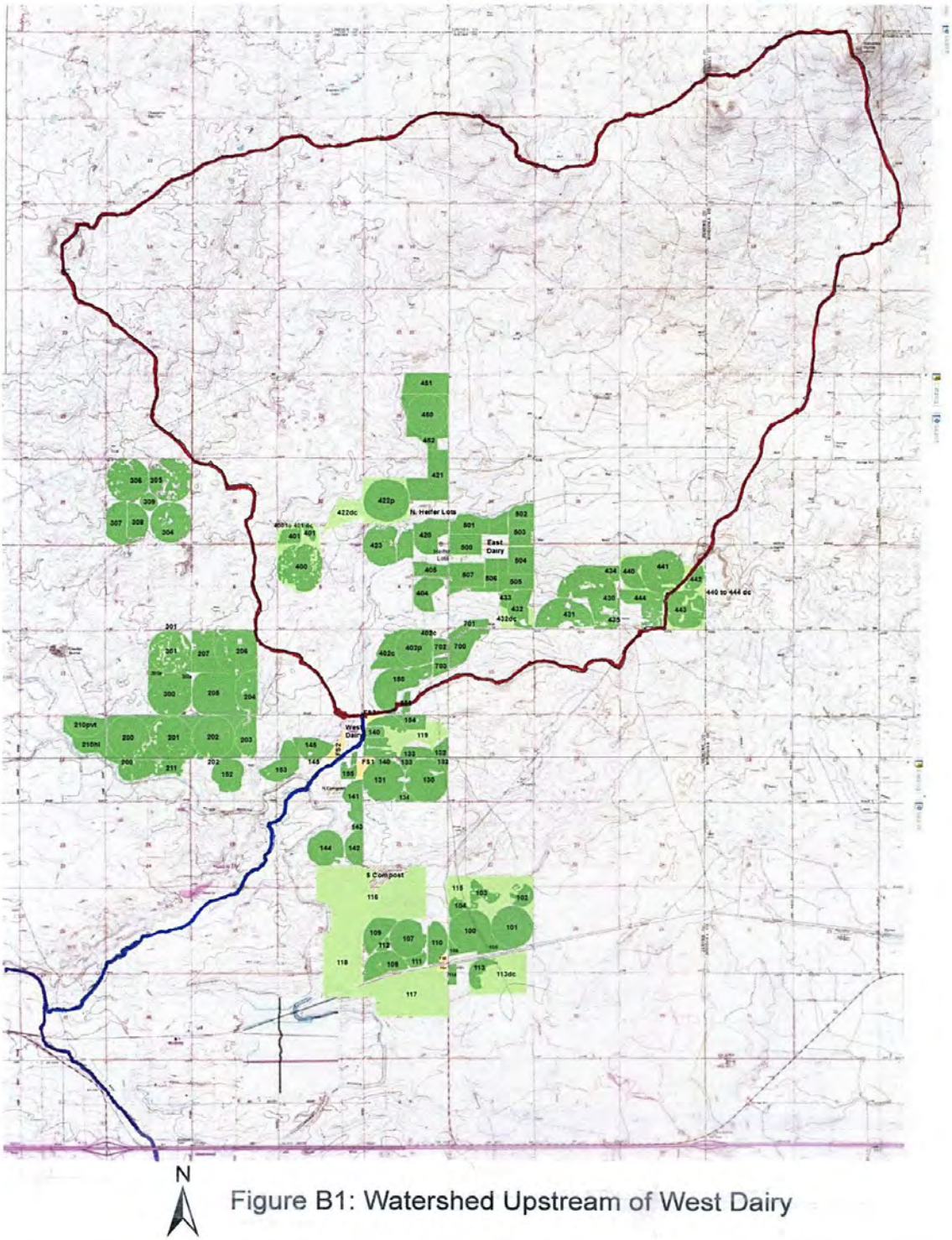

Figure B1. Watershed upstream of the West Dairy. Boundary is shown in red. The A&B Main Drain passing through the West Dairy is shown in blue. The North Side Canal is shown in the lower left in purple.

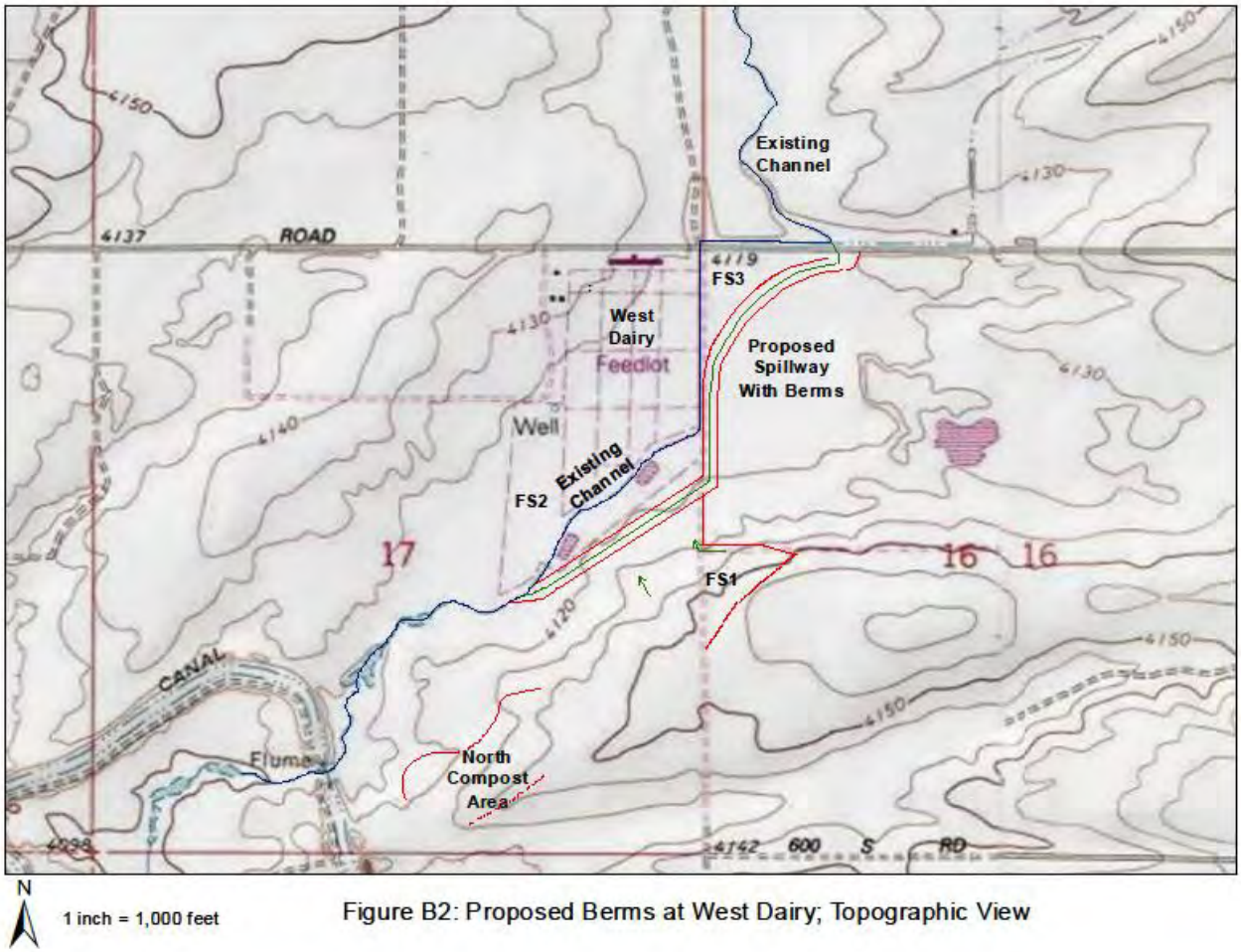

Figure B2: Proposed Berms at West Dairy; Topographic View

Figure B2 Overview of Feed Storage Areas 1-3 and proposed berms at West Dairy; topographic view.

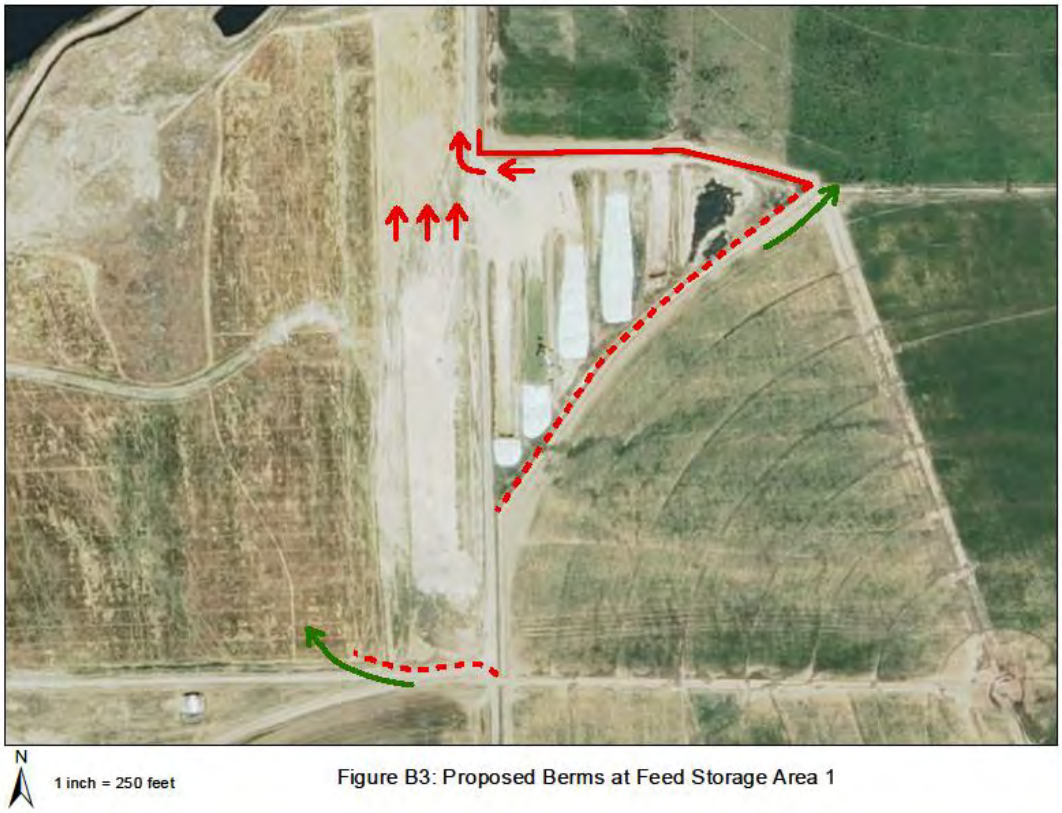

Figure B3. Proposed berms at Feed Storage Area 1.

Figure B4. Current berms requiring enlargement at Feed Storage Area 2.

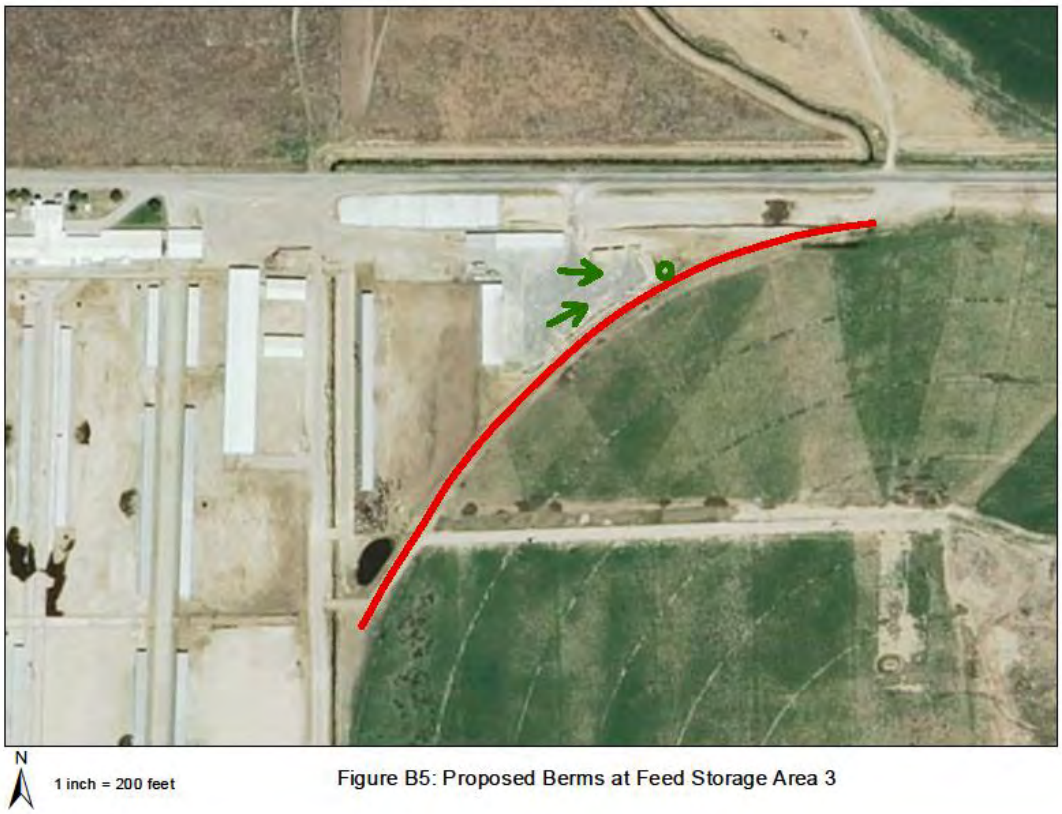

Figure B5. Proposed berm to prevent large storm runoff from entering Feed Storage Area 3.

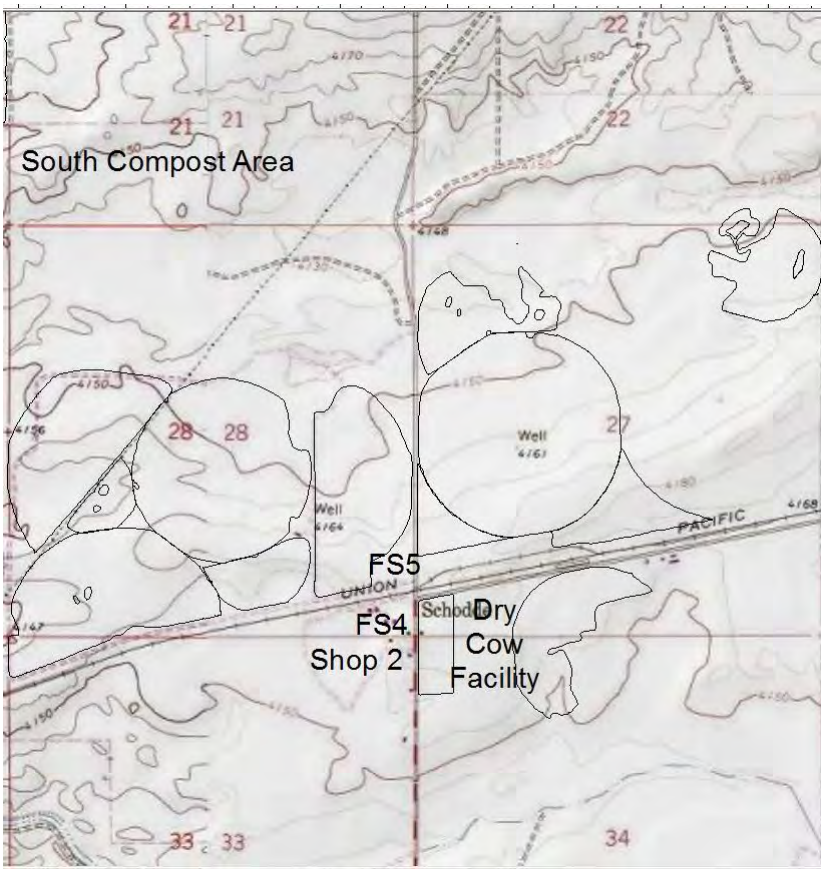

Figure B6. Feed Storage Areas 4 and 5.

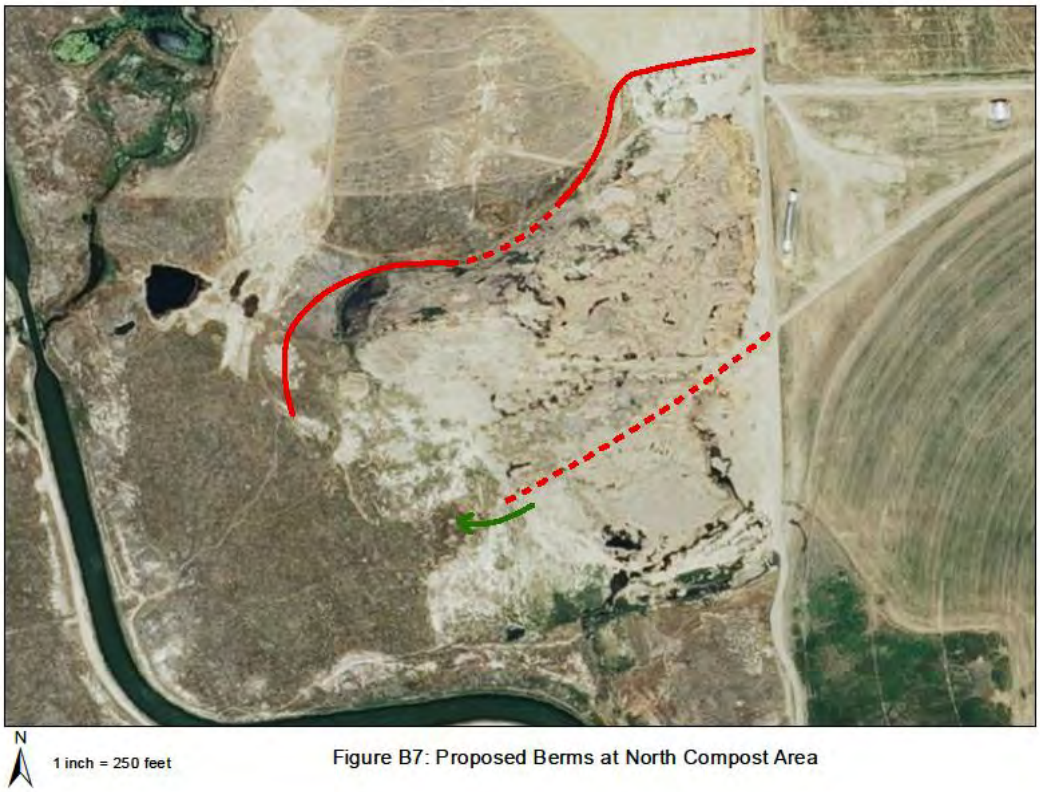

Figure B7. Proposed berms at the north compost area. Solid line is containment berm. Dashed line is diversion berm to prevent run-on.

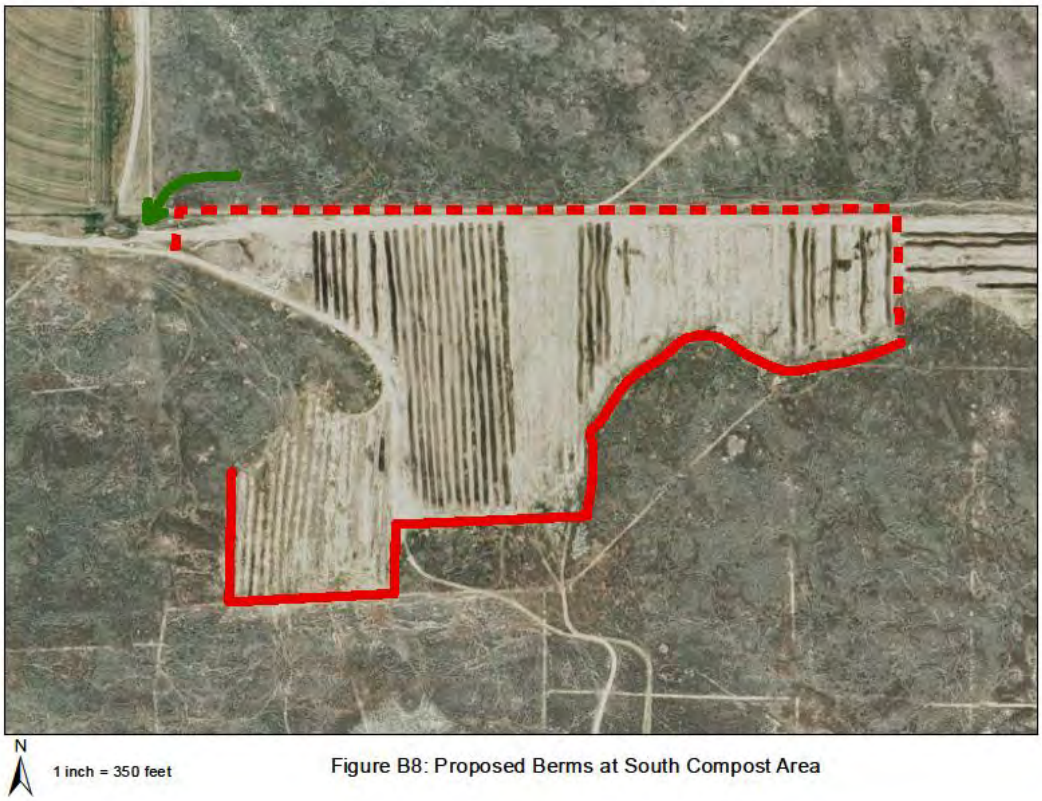

Figure B8. Proposed berms at the south compost area. Solid line is containment berm. Dashed line is diversion berm to prevent run-on.

APPENDIX B: PHOSPHORUS AND NITROGEN (LEACHING) RISK ASSESSMENTS AND PLANNED CONSERVATION PRACTICES

Phosphorus risk assessments are on pages 226-432. Nitrogen (Leaching) risk assessments are on pages 433-524.

Fields with an overall Risk Rating of High or Very High

Mitigating practices, in addition to the BMP's below, are listed after each field's risk assessment.

140	155	430
150p	420	431
150c	423-424	441

Fields adjacent to the Main Drain or to a ditch draining to the Main Drain

Compost will only be applied to these fields when it can be incorporated (on pastures it will be aerated) within 72 hours.

Each of these fields will have a 35' vegetated buffer (VB) and/or berming (B).

140 Berm when new path for Main Drain is built

144 VB on northwest side

150p VB (in field) along Main Drain

150c VB at southwest corner adjacent to ditch flowing to the west

155 VB at north end adjacent to Main Drain

405 VB at north end adjacent to drainage ditch

420 VB at north and south ends

421 Berm along south side to prevent runoff from flowing into the North Heifer Lots

422p VB at southeast corner

423&424 VB on both sides of Main Drain flowing through field

430 VB along drain ditch

431 VB along drain ditch

434 VB along drain ditch

440 VB along drain ditch

441 VB along drain ditch

501 VB along drain ditch

502 VB along drain ditch

504 VB on west side of 507

505 VB on west side of 507

506 VB on west side of 507

507 VB on west side of 507

601 VB on south side

BMP's Used on Horizon Organic Dairy

BMP's Used on Permanent Pasture Fields Are Marked With ***PP***

BMP's Used on Cropland Are Marked With ***CL***

BMP's Used on Dry Pasture Are Marked With ***DP***

CL after corn Chiseling and Subsoiling

CL after barley, PP Conservation Cover

CL Conservation Tillage

***CL* after barley** Cover/Green Manure Crop

CL Crop Rotation

CL Residue Management

CL PP Irrigation Management

CL PP Sprinkler System

PP Watering Facility

PP Grazing Land Mechanical Treatment- Aerway Pasture Aerator

PP Prescribed Grazing

CL PP Vegetative Buffer or Filter Strip

CL PP Berm

Dairy Sediment Basin

Dairy Composting Facility

Manure Nutrient Application Rate

Compost land application will be 75% of the crop uptake rate on fields with a soil test phosphorus level greater than 40 and less than 80 ppm. On fields with a soil test phosphorus level of 80 ppm or greater, application will be 50% of the crop uptake rate in order to reduce higher levels of phosphorus.

FIELD: 100
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 45

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Low

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 101
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 46.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 102
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 48.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 103
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 61.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 104
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 38

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 105
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 49.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Medium

Phosphorus Application Method: 41.2

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 106
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 49.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 107
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 56.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 108
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 81.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Medium

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 109
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 48.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 110
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 56.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 111
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 91.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 112
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 102

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 113
Overall Risk Rating: **Low**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 18

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: *Mechanical aeration of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 113dry
Overall Risk Rating: Low

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 27

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments: Sufficient soil P is available for normal agronomic production.

Manure Phosphorus Application Method **Risk Rating:** Very Low or N.A.

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *This field is in a continuous crop of dryland pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. The only nutrients applied to this field are from grazing cows.*

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 114

Overall Risk Rating: Medium

Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 21

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 40 **Soil Test Type:** Olsen

Comments: Soil test P is in the optimum range for most crops. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: Organic phosphorus is being applied to a field with surface runoff *with aeration and harrowing for soil incorporation.* Organic phosphorus fertilizer should only be applied to fields with surface runoff when the organic material will be incorporation into the soil as soon after application as possible. Since surface runoff occurs, phosphorus losses will be substantially lower if the organic phosphorus is incorporated into the soil immediately following application. *Note: While this field does have runoff, this runoff flows to a containment basin, where it evaporates.*

This field is in a continuous crop of pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. Yearly mechanical aerationand frequent harrowing of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** High

List best management practices that mitigate runoff.

Runoff flows to a containment basin, where it evaporates.

Continuous pasture provides continuous cover as well as filtering and uptake of nutrients.

Comments: Consider implementing Conservation Practices on-field and off-field that reduce or eliminate runoff and erosion.

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 115
Overall Risk Rating: Low

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 53

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** Very Low or N.A.

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *This field is in a continuous crop of dryland pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. The only nutrients applied to this field are from grazing cows.*

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 116
Overall Risk Rating: **Low**

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 17

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** Very Low or N.A.

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *This field is in a continuous crop of dryland pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. The only nutrients applied to this field are from grazing cows.*

Irrigation Runoff N/A **Risk Rating:** Low

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 117
Overall Risk Rating: Low

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 26

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** Very Low or N.A.

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *This field is in a continuous crop of dryland pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. The only nutrients applied to this field are from grazing cows.*

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 118
Overall Risk Rating: Low

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 67

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** Very Low or N.A.

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *This field is in a continuous crop of dryland pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. The only nutrients applied to this field are from grazing cows.*

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 119
Overall Risk Rating: Low

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 38

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** Very Low or N.A.

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *This field is in a continuous crop of dryland pasture grass, which provides cover, nutrient uptake, and filters nutrients from runoff. The only nutrients applied to this field are from grazing cows.*

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 130
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 96

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.8 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 131
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 136

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration and harrowing of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 132
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 95.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 1 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 133
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 134

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments: *Mechanical aeration of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 134
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 84.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 140

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year, with reduced nutrient application until the soil test phosphorus levels come down. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field have been reduced by 50% to help reduce the phosphorus level on this field*

Manure Phosphorus Application Method *This field is in permanent pasture. The pasture provides continuous cover and nutrient uptake. This field does not have runoff, therefore nutrients will not leave the field. Yearly mechanical aeration along with frequent harrowing will incorporate nutrients and will create more surface area for nutrient absorption. Compost will only be applied when it can be incorporated by aeration within 72 hours of application.*

Distance to Surface Water Body *The A & B Irrigation District Main Drain runs along the west side of this field. This ditch will be enlarged, moved to the east, and bermed as part of the implementation of this permit. The berming will prevent manure nutrients from entering this ditch.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 103.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0 **Risk Rating:** Very High

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus.

FIELD: 141
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 93.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.25 **Risk Rating:** Low

Comments: Consider eliminating runoff by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus.

FIELD: 142
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 93.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments:

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 1.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 143
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 57

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments:

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 2 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 144
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 134

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: *Compost will only be applied when it can be incorporated within 72 hours of application by disking or aeration. A 35' vegetative buffer will also be used adjacent to the Milner-Gooding Canal.*

FIELD: 145
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 121

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year, with reduced nutrient application until the soil test phosphorus levels come down. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field may be done based on this information. In this plan, nutrient applications to this field have been reduced by 50% to help reduce the phosphorus level on this field

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Yearly mechanical aeration along with frequent*

harrowing will incorporate nutrients and will create more surface area for nutrient /water absorption.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Distance to Surface Water Body: 0.1 **Risk Rating:** High

Comments: *Potential winter runoff is directed through a ditch to West Dairy Pond 1.*

FIELD: 150p

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at at 75% of crop phosphorus uptake levels.*

Manure Phosphorus Application Method *This field is in cropland rotation, and does not have irrigation runoff. Compost will be incorporated within three days of application on this field. A winter cover crop will be grown most years and turned under in the spring, providing winter cover.*

Distance to Surface Water Body *An irrigation return flow ditch runs along the west side of this field. A 35' vegetated buffer will be used on the west side of this field. This ditch will be enlarged to the south where it runs east of the West Dairy. In this area east of the West Dairy, the ditch will be moved to the east, and bermed as part of the implementation of this permit. The enlarged ditch will carry runoff flow adequately in the winter, so there should not be backup from this ditch onto Field 150.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 37.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments: *Mechanical aeration of this field when in alfalfa will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very High

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments:

FIELD: 150c

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at 75% of crop phosphorus uptake levels.*

Manure Phosphorus Application Method *This field is in cropland rotation, and does not have irrigation runoff. Compost will be incorporated within three days of application on this field.*

Distance to Surface Water Body *An irrigation return flow ditch runs along the southwest side of this field. A 35' vegetated buffer will be used on the southwest side of this field. This ditch will be enlarged to the south where it runs east of the West Dairy. In this area east of the West Dairy, the ditch will be moved to the east, and bermed well as part of the implementation of this permit. The enlarged ditch will carry runoff flow adequately in the winter, so there should not be backup from this ditch onto Field 150.*

Overall Risk Rating: High

Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 36

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Compost will be incorporated within three days of application on this field.

Irrigation Runoff Index (Irrigated) **Risk Rating: :** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *A 35' vegetated buffer will be used on the southwest end of this field adjacent to the drain ditch flowing to the west..*

FIELD: 152
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 106.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 153
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 107.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration of this field will allow for incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption. Frequent harrowing distributes pasture manure nutrients evenly over the field.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 154
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 55.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration and harrowing of this field will allow for incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.3 **Risk Rating:** Low

Comments:.

FIELD: 155

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at 50% of crop phosphorus uptake levels.*

Manure Phosphorus Application Method *This field is in permanent pasture, and does not have irrigation runoff. Compost will be incorporated by aeration within three days of application on this field.*

Distance to Surface Water Body *The Main Drain runs along the north side of this field. A 35' vegetated buffer will be used along this ditch. This ditch will be enlarged to increase capacity both north of Field 155 and east of the West Dairy.*

Overall Risk Rating: High
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 86.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments: *Mechanical aeration and harrowing of this field will allow for some incorporation of nutrients, as well as creating more surface area for nutrient/runoff absorption.*

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0 **Risk Rating:** Very High

Comments: Because of the high soil test P, runoff should be eliminated; sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *Compost will only be applied when it can be incorporated by an aerator within 72 hours. A 35' vegetated buffer is in place since this field is in pasture. No additional nutrients will be applied to this buffer area.*

FIELD: 200
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 24.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 200c
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 16.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: Great job!

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 201
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 21.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 201c
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 23

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 202
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 23.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 202c
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 21

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 203
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 24.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 203c
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 22

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 204
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 8.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 204c
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 11.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 205
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 11.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Deep Banding

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 206
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 12.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 206ec
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 8.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 206wc
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 20.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 207
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 13.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 207c (part of 207)
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 27.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 210hl
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 11.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 210p
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 14.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 211
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 30.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 300
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 72.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 301
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 34.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: Sufficient soil P may be available for normal agronomic production after fertilization, except for possible response to a starter fertilizer for specific crops like potatoes (see Crop Specific Recommendations). A long range nutrient management plan will assist you in maintaining optimum P levels.

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 302a
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 39.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 303a
Overall Risk Rating: Medium
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 36.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 304
Overall Risk Rating: Medium

Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 58

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 6 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 305
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 53.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 6 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 306
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 43.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 6 **Risk Rating:** Very High

Comments: No Data

FIELD: 307
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 111.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 27.5

Comments:.

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments:

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0 **Risk Rating:** Very High

Comments: A drainageway flowing to the southwest and dead ending in the desert just upstream of the Milner-Gooding Canal drains this field.

FIELD: 308
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 63.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Low

Comments: No Data

FIELD: 309
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 44.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Low

Comments: No Data

FIELD: 400
Overall Risk Rating: Medium
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 28.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: Great job!

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.6 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 400 401 dry corners
Overall Risk Rating: **Low**
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": No Valid Soil Test Data

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** Very Low

Manure Application Method: N/A

Comments: Great job!

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.6 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 401
Overall Risk Rating: Medium
Low potential for phosphorus loss, if current farming practices are maintained.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 35.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: Great job!

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 2 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 402c
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 24

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow. *Compost will only be applied when it can be incorporated within 72 hours.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments:

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.1 **Risk Rating:** High

Comments: *This field uses wheelline irrigation. There is a strip of desert between this field and the Main Drain to the west, serving as a >400' filter. The water flow here is to the west.*

FIELD: 402p
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 24

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0 **Risk Rating:** Low

Comments:

FIELD: 404
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 23.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.45 **Risk Rating:** Low

Comments: Consider eliminating runoff by installing sediment retention measures like filter strips or sediment basins to minimize offsite transport and loss of Phosphorus.

Winter runoff from the south end of this field would flow south across high desert land into a drainageway that dead ends in a low area. Runoff from the north end of 404 would flow into a drain along the north side that flows west and dead ends. Neither drain directly connects with a conduit to waters of the US.

FIELD: 405

Overall Risk Rating: **Medium**

Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 31.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration of this field in the fall serves to incorporate surface nutrients and to open up the soil to increase infiltration.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: *An irrigation return flow ditch runs along the north side of this field. A 35' vegetated strip is in place, since this field is in pasture. No additional nutrients will be applied to this 35' strip.*

FIELD: 420

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at 50% of crop phosphorus uptake levels, in order to reduce soil test phosphorus.*

Manure Phosphorus Application Method *This field is in permanent pasture. Mechanical aeration allows some incorporation, and increases the surface area for nutrient absorption. The pasture provides continuous cover and nutrient uptake. This field does not have irrigation related runoff. Compost will only be applied to this field when it can be incorporated within 72 hours.*

Distance to Surface Water Body *An irrigation return flow ditch runs along the north side of this field. Another drainageway flows to the west about 350' south of this field. A 35' vegetated buffer is in place on both the north and south sides of this field; no additional nutrients will be applied to this buffer area.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 88.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 44.4

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: *See above*

FIELD: 421
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 57.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration allows incorporation, and increases the surface area for nutrient absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.18 **Risk Rating:** Medium

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *Berming needs to be done along the south side of this field to prevent winter runoff from flowing onto the North Heifer Lots. A 35' grass buffer already exists since this field is in pasture; no additional nutrients will be applied to this buffer.*

FIELD: 422dc
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 42.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.05 **Risk Rating:** High

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *The Main Drain flows 300' to the southeast of this field. Only pasture cows add nutrients to this field, so the risk of nutrient movement is small.*

FIELD: 422p
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 143.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc. *Mechanical aeration allows incorporation, and increases the surface area for nutrient absorption.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.07 **Risk Rating:** High

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *The Main Drain flows 300' to the southeast of this field. A 35' vegetated buffer will be used in the area near the Main Drain; no additional nutrients will be applied to this area. Compost will only be applied*

when it can be incorporated within 72 hours.

FIELD: 423 &424

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at 75% of crop phosphorus uptake levels, in order to reduce soil test phosphorus.*

Manure Phosphorus Application Method *This field is in permanent pasture. The pasture provides continuous cover and nutrient uptake. This field does not have irrigation related runoff. Mechanical aeration allows some incorporation, and increases the surface area for nutrient absorption. Compost will only be applied when it can be incorporated within 72 hours.*

Distance to Surface Water Body *An irrigation return flow ditch runs between Fields 423 and 424. 35' grass buffers exist on both sides of the ditch because this field is in pasture; no additional nutrients will be added to this buffer area.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 53.6

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *These fields are already irrigated with sprinklers.*

FIELD: 430

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at 75% of crop phosphorus uptake levels, in order to reduce soil test phosphorus.*

Manure Phosphorus Application Method *This field is cropland. This field does not have irrigation related runoff. In most years, a winter cover crop will be grown. Compost will only be applied when it can be incorporated within 72 hours.*

Distance to Surface Water Body *Irrigation drains run along the north and south sides of this field. A 35' grass buffer will be constructed along these ditches; no additional nutrients will be added to this buffer area.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 38.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *Two drain ditches run adjacent to this field. 35' vegetated buffers will be used adjacent to these ditches.*

FIELD: 431

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are at 100% of crop phosphorus uptake levels.*

Manure Phosphorus Application Method *This field is cropland. This field does not have irrigation related runoff. In most years, a winter cover crop will be grown. Compost will only be applied when it can be incorporated within 72 hours.*

Distance to Surface Water Body *An irrigation drains runs along the north side of this field. A 35' grass buffer will be constructed along this ditch; no additional nutrients will be added to this buffer area.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 33.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *A drain ditch runs along the northeast side of this field. A 35' vegetated buffer will be used adjacent to this ditch.*

FIELD: 432dry

Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 27

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Deep Banding

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments: Sufficient soil P is not available for normal agronomic production. Starter fertilizer is recommended for specific crops like potatoes (see Crop Specific Recommendations). Use recommended application rates and methods to build and maintain soil P at optimum levels.

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *This is a non-irrigated pasture.*

FIELD: 432p
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 26.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: Because of the high soil test P, runoff should be eliminated by converting to sprinkler irrigation or installing a tailwater recovery system; or sediment retention measures like filter strips or sediment basins should be installed to minimize offsite transport and loss of Phosphorus. *This field drains to a drainageway to the west that dead ends in a low area.*

FIELD: 433

Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 57.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: *This field is in permanent irrigated pasture, which provides continuous cover and nutrient uptake. This field does not have irrigation related runoff. Mechanical aeration and harrowing will be used to incorporate compost.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Low

Comments: *A drainageway runs to the west of this field. This drainageway dead ends in a low area to the west*

FIELD: 434
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 19.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *A drain ditch runs along the north side of this field. A 35' vegetated buffer will be used adjacent to this ditch. Compost will only be applied when it can be incorporated within 72 hours.*

FIELD: 435
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 44

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.9 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 440
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 25.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *A drain ditch flows along the north side of this field. A 35' vegetated buffer will be used. Compost will only be applied when it can be incorporated within 72 hours.*

FIELD: 440 to 444 dry corners
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": No Valid Soil Test Data

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Low

Manure Application Rate: 6.3

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** Medium

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Class (Non-Irrigated) **Risk Rating:** Low

Comments: The likelihood for runoff to occur on this field is low to very low.

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *A drain ditch flows along the north side of this field. Since this is dryland pasture, no nutrients other than from pasturing cows are applied here.*

FIELD: 441

Best Management Practices for Mitigation of High Risk Rating

Soil Test P *Soil testing on a grid basis will be done every year. An Annual Nutrient Budget will be developed each year based on the phosphorus levels. Grid sampling allows for a more detailed analysis of where in the field the phosphorus levels are highest. Variable nutrient application across the field can be done based on this information. In this plan, nutrient applications to this field are 75% of crop phosphorus uptake levels.*

Manure Phosphorus Application Method *This field is in permanent irrigated pasture, which provides continuous cover and nutrient uptake. This field does not have irrigation related runoff. Mechanical aeration and harrowing will be used to incorporate compost.*

Distance to Surface Water Body *A drainageway runs to the north of this field. A 35' vegetated buffer will be constructed along the drain. Compost will only be applied when it can be incorporated within 72 hours.*

Overall Risk Rating: High
High potential for P loss and adverse effects on surface and/or ground waters. Soil and water conservation measures and phosphorus management plans are needed to reduce the probability of phosphorus loss. Reference risk assessment below and consult a local resource conservation planning specialist and/or the Idaho OnePlan Conservation Planning module to determine appropriate Best Management Practices for this field.

Risk Rating: Very High

Soil Test P

Soil Test Depth / Phosphorus Concentration 0-12": 45.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 41.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High

Comments: *A drain ditch flows along the north side of this field. A 35' vegetated buffer will be used.*

FIELD: 442
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 25.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 1 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 443
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 39.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Deep Banding

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 1 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 444
Overall Risk Rating: Low

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 19.7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 450
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 32

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 1 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 451
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 12.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 1.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 452
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 32.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 30 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject Organic P > 2" or plow; otherwise incorporate > 3" by disking, chiseling, etc.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.6 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 500
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 73

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 55.5

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.5

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 501

Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 23

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 88.9

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: *This field is in permanent irrigated pasture; yearly aeration and frequent harrowing open the soil and allow for some incorporation of nutrients. The pasture provides continuous cover and nutrient uptake. This field does not have irrigation related runoff. Compost will only be applied when it can be incorporated by aeration within 72 hours.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: *An irrigation supply ditch runs to the north of this field. A 35' vegetated buffer will be used along this ditch.*

FIELD: 502

Distance to Surface Water Body

Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 32.9

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Deep Banding

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 88.9

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: *This field is in permanent irrigated pasture; yearly aeration and frequent harrowing open the soil and allow for some incorporation of nutrients. The pasture provides continuous cover and nutrient uptake. This field does not have irrigation related runoff. Compost will only be applied when it can be incorporated by aeration within 72 hours.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: *An irrigation supply ditch runs to the north of this field. A 35' vegetated buffer will be used along this ditch.*

FIELD: 503
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 45.1

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 88.9

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.1 **Risk Rating:** High

Comments:

FIELD: 504
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 16.8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 88.9

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: *Compost will only be applied when it can be incorporated within 72 hours.*

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High.

Comments: *A drainageway flows through this field, 505, 506, and 507. At the west end of 507, the 175' wide tree and grass wheelline area will be used as a vegetated buffer with no additional nutrient application beyond pasturing cows. The drainageway then flows to the west and dead ends in the desert.*

FIELD: 505
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Medium

Soil Test Depth / Phosphorus Concentration 0-12": 17.3

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 88.9

Comments:

Manure Phosphorus Application Method **Risk Rating:** Undetermined

Manure Application Method: *Compost will only be applied when it can be incorporated within 72 hours.*

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High.

Comments: *A drainageway flows through this field, 504, 506, and 507. At the west end of 507, the handline area will be used as a vegetated buffer with no additional nutrient application beyond pasturing cows. The drainageway then flows to the west and dead ends in the desert.*

FIELD: 506
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 26.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 88.9

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: *Compost will only be applied when it can be incorporated within 72 hours.*

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High.

Comments: *A drainageway flows through this field, 504, 505, and 507. At the west end of 507, the wheelline area will be used as a vegetated buffer with no additional nutrient application beyond pasturing cows. The drainageway then flows to the west and dead ends in the desert.*

FIELD: 507
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** High

Soil Test Depth / Phosphorus Concentration 0-12": 32.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 66.7

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: *Compost will only be applied when it can be incorporated within 72 hours.*

Comments: No Data

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.0 **Risk Rating:** Very High.

Comments: *A drainageway flows through this field, 504,505, and 506. At the west end of 507, the wheelline area will be used as a vegetated buffer with no additional nutrient application beyond pasturing cows. The drainageway then flows to the west and dead ends in the desert.*

FIELD: 601
Overall Risk Rating: **Medium**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Very High

Soil Test Depth / Phosphorus Concentration 0-12": 81.2

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments: Soil test P is very high and may be approaching the critical Phosphorus Threshold. Test soils annually to monitor buildup or decline in soil P.

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 89.2

Comments:

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: *Compost will only be applied when it can be incorporated within 72 hours.*

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.01 **Risk Rating:** Very High

Comments: The Main Drain *flows to the south of this field. A 35' vegetated buffer will be used adjacent to the drain, with no additional nutrient application beyond pasturing cows.*

FIELD: 700
Overall Risk Rating: Medium
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 8

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.2 **Risk Rating:** Medium

Comments: This field drains to the north into a drainageway that dead ends in the desert.

FIELD: 701

Overall Risk Rating: **Low**

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 7

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very Low or N.A.

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.5 **Risk Rating:** Very Low

Comments: *This field drains to a drainageway to the north that flows west through the desert and dead ends in a low area.*

FIELD: 702
Overall Risk Rating: **Low**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 7.5

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very High

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.75 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 703
Overall Risk Rating: **Low**
Medium potential for phosphorus loss. Some remediation measures should be undertaken to minimize the probability of phosphorus loss.

Soil Test P **Risk Rating:** Low

Soil Test Depth / Phosphorus Concentration 0-12": 3.4

Soil Test Depth / Phosphorus Concentration 18-24": No Valid Soil Test Data

Idaho Nutr. Management Standard Threshold: 20 **Soil Test Type:** Olsen

Comments:

Phosphorus Fertilizer Application Rate **Risk Rating:** Very Low or N.A.

Phosphorus Application Rate: 0

Comments: No Data

Phosphorus Fertilizer Application Method **Risk Rating:** Very Low or N.A.

Phosphorus Application Method: Not Applied

Comments: No Data

Manure Phosphorus Application Rate **Risk Rating:** Medium

Manure Application Rate: 55.1

Comments: No Data

Manure Phosphorus Application Method **Risk Rating:** High

Manure Application Method: N/A

Comments: For greatest phosphorus efficiency inject organic P > 2" or plow.

Irrigation Runoff Index (Irrigated) **Risk Rating:** Very High

Comments: No Data

Surface Irrigation or Overhead Irrigation **Risk Rating:** Very Low or N.A.

Comments: No Data

Runoff Best Management Practices **Risk Rating:** Very Low or N.A.

Comments: No Data

Distance to Surface Water Body: 0.75 **Risk Rating:** Very Low or N.A.

Comments: No Data

FIELD: 100
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 101
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 102
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 103
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 104
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 105
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Medium

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzles. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 106
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and

subsequent subsurface transport to ground water should be minimal.

FIELD: 107
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 108
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 109
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Very Low or N.A.

Comments: Because the dominant soils have very slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 110
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 111
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 112
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 113

Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 113dry
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 114
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 115
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 116
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: No Data

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:**

Comments: No Data

FIELD: 117
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:**

Comments: No Data

FIELD: 118
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:**

Comments: No Data

FIELD: 119
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 130
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this

field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 131
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 132
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 133
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high

Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 134
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 140
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 141
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 142
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Very Low or N.A.

Comments: Because the dominant soils have very slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 143
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Very Low or N.A.

Comments: Because the dominant soils have very slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 144
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 145
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 150p
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 150c
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 152
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 153

Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 154
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether

adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 155
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 200
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant

test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 200c
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 201
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 201c
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 202
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 202c
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 203
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 203c
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 204
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant

test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 204c
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 205
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 206
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 206ec
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 206wc
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 207
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 207c
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 210hl
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant

test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 210p
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 211
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Medium

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzles.

Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 300
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 301
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 302a
Overall Risk Rating: Medium

Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 303a
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether

adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 304
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant

test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 305
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 306
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 307
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 308
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 309
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 400
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 400 401 dry corners
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 401
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 402c
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 402p

Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 404
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 405
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 420
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 421
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 422dc
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 422p
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 423 &424
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 430
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 431
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 432dry
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 432p
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 433
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or

precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 434
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop

growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 435
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 440
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 440 to 444 dry corners
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 441
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance

problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 442
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or

precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 443
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop

growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 444
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is

applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 450
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water

transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 451
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 452
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:**

Comments: No Data

FIELD: 500
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 501
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 502
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 503
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 504
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 505
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 506
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 507
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 601
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop

growth needs.

Irrigation Efficiency **Risk Rating:** Low

Comments: Good apparent irrigaton water management, but if crop requirements are not being met crop yields may suffer from a water shortage. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Medium

Comments: Because the dominant soils have moderate to high infiltration rates and water transmission, this field may be vulnerable to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water and interconnected surface water may be a concern.

FIELD: 700
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 701
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is

applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 702
Overall Risk Rating: Low
Leaching losses are probably not contributing to soluble nutrient leaching below the root zone.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Very Low or N.A.

Comments: Because the dominant soils have very slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and subsequent subsurface transport to ground water should be minimal.

FIELD: 703
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:** Very Low or N.A.

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: Nutrient leaching should not be a problem, however, there is a potential salt balance problem (and the crop's water requirement may not be completely satisfied). Evaluate whether adequate water is being applied to meet salt (leaching) requirements. If irrigation water has a high Electrical Conductivity (EC)/Sodium Adsorption Ration (SAR) salt balance may be critical.

Nitrogen Application Rate **Risk Rating:** Very Low or N.A.

Comments: Some potential for nitrogen leaching if excess water is applied from irrigation and/or precipitation events. Potential for yield reduction from a nitrogen deficiency. Use soil and/or plant test and appropriate fertilizer recommendation for determining nutrient application rates.

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: Good job! Follow Nitrogen application recommendations and apply according to crop growth needs.

Irrigation Efficiency **Risk Rating:** Very High

Comments: Check and maintain system for leaky joints and worn-out pumps, sprinklers or nozzels. Use flow controllers to improve efficiency. Be sure that the right amount of irrigation water is applied as uniformily as possible to meet crop needs and minimize leaching from the root zone. Check with irrigation professional to assure that crop growth requirements are being adequately met.

Soil/Water Table Depth **Risk Rating:** Low

Comments: Because the dominant soils have slow infiltration rates and water transmission, this field will probably not contribute to ground water contamination. Nutrient leaching and

subsequent subsurface transport to ground water should be minimal.

FIELD: Compost Site
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very High

Comments: No Data

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: No Data

FIELD: d1 runoff area
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very High

Comments: No Data

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Medium

Comments: No Data

FIELD: d2 ro area
Overall Risk Rating: Medium
Leaching losses may be contributing to soluble nutrient leaching below the root zone during some years.

Percolation **Risk Rating:**

Deep Percolation (as % of Evapotranspiration): <5% Over ET

Comments: No Data

Nitrogen Application Rate **Risk Rating:** Very High

Comments: No Data

Nitrogen Application Timing **Risk Rating:** Very Low or N.A.

Comments: No Data

Soil/Water Table Depth **Risk Rating:** Low

Comments: No Data

APPENDIX C: SOIL AND MANURE TEST RESULTS

2012 fall soil samples averages per field

Sample Id	Soil pH	Sol. Salt	OM %	NO3 ppm	Olsen ppm	K ppm	Mg ppm	Ca ppm	Na ppm	S ppm	Zn ppm	B ppm	CEC	K %
100	8.2	0.4	2.2	5	35	413	459	3300	96	14	2.2	0.8	22	4.9
101	8.2	0.4	2.3	6.8	53	449	493	3893	81	18	3	1	25	4.6
102	8.3	0.4	2	1.3	35	817	436	3182	122	33	1.1	1	22	9.4
103	8.1	0.4	2.3	1.3	52	782	417	3013	92	25	1.6	1	21	9.6
104	8.2	0.4	2.1	1.3	36	591	461	3115	120	28	1.5	1	21	7.1
105	8.3	0.4	2.3	9.3	43	536	416	3663	73	17	2.2	0.9	23	5.9
106	8.1	0.4	2.5	8.7	54	550	384	3442	74	16	2.5	0.7	22	6.4
107	8.1	0.5	2.3	11.6	64	701	481	3610	113	26	2.5	1.5	24	7.4
108	8.2	0.5	2.4	13	85	820	482	3842	106	24	3.4	1.7	26	8.2
109	8.4	0.6	2.1	16.8	24	583	510	3638	169	34	1.1	1.3	25	6.1
110	8	0.5	2.1	8.9	65	610	449	3570	103	22	2.5	1.2	24	6.6
111	8.3	0.4	2.7	5.4	73	656	427	3570	60	14	2.8	0.9	23	7.2
112	8.4	0.4	3	5.8	72	669	427	3374	67	16	2.3	1	22	7.6
113	8.3	0.4	1.8	4.9	18	754	396	3321	102	24	1.6	1.2	22	8.9
114	7.9	0.3	2.1	8.5	30	535	379	2891	58	11	2.1	0.8	19	7.2
130	8.2	0.5	2.3	11.2	116	645	615	3510	126	26	5.1	1.7	25	6.7
131	8.3	0.5	2.4	8.1	117	881	566	3322	125	30	4.3	1.7	24	9.4
132	8	0.4	2.9	3.3	68	703	514	2988	121	25	3.3	1.4	22	8.4
133	8.3	0.4	2.2	4.7	90	807	538	3276	116	23	3.2	1.2	23	8.7
134	8.1	0.4	2.1	10.5	97	683	486	3408	81	15	4.4	1.2	23	7.5
140	7.9	0.5	2.9	17.5	85	964	592	3185	118	24	3.9	1.6	24	10.5
141	8.4	0.5	2.3	4.9	76	612	522	3210	131	24	4.1	1.4	23	7.1

142		8.1	0.5	2.2	8.5	92	754	544	3495	128	26	3	1.7	25	8
143		8.1	0.5	2.4	22.5	56	471	437	3694	92	24	2.5	1.1	24	5.1
144		8.1	0.4	3.3	9.1	133	811	489	3313	100	20	6.3	1.7	23	9
145		8.1	0.5	2.7	13.3	140	940	583	3605	117	23	4.7	1.7	26	9.4
150	150p	8.3	0.5	2.1	7.1	34	463	501	3435	139	27	1.8	1.6	23	5.2
151	150c	8.1	0.4	1.8	10.7	41	470	527	3214	91	15	1.5	1.1	22	5.7
152		8.2	0.5	2.4	6.9	92	730	628	3571	132	30	4.3	1.7	26	7.3
153		8.1	0.4	2.4	5.3	89	877	623	3185	92	18	3.5	1.9	24	9.5
154		8.1	0.4	2.4	5.7	35	563	473	3369	82	19	1.9	0.9	23	6.4
155		8.5	0.4	1.8	3.9	64	1627	446	3094	108	17	2	1.1	24	17.9
200	200	8.2	0.5	2.1	7.6	20	237	532	3466	150	33	2.4	1.5	23	2.6
200c	200.1	8.1	0.4	2.1	7.6	16	234	517	3480	89	19	1.8	1.1	23	2.7
201	201	8.1	0.4	2	14.5	39	374	521	3207	103	13	2.9	1.4	22	4.4
201c	201.1	8.1	0.4	1.9	4.4	17	323	553	3007	88	14	1.4	1	21	4
202	202	8.3	0.5	2.2	5	17	249	535	3630	163	32	2.6	1.6	24	2.7
202c	202.1	8.1	0.4	2.3	8.5	16	221	512	3339	86	11	2	0.9	22	2.6
203	203	8.3	0.5	2.1	5.3	18	263	561	3612	161	28	2.6	1.5	24	2.8
203c	203.1	8.1	0.4	1.7	6.6	14	262	580	3628	94	10	2	0.8	24	2.8
204	204	8.2	0.5	2.3	9.6	8	157	561	3527	149	23	2.2	1.3	23	1.7
204c	204.1	8.2	0.4	2.3	8.5	14	221	491	3401	94	11	2	1.1	22	2.6
205	205	8.4	0.6	1.7	11.1	16	240	526	3559	198	34	1.7	1.6	24	2.6
206	206	8.4	0.5	2	8.3	17	277	648	3870	163	24	2.2	1.3	26	2.7
206ec	206.1	8.4	0.4	1.8	5.6	9	232	454	3617	93	11	2.4	0.9	23	2.6
206wc	206.2	8.2	0.4	1.9	11.2	16	268	503	3116	111	18	2.3	1.1	21	3.3
207	207	8.2	0.4	2.1	7.1	13	223	540	3456	139	19	2	1.3	23	2.5
207c	207.1	8.1	0.5	2.2	8.4	19	284	549	3195	137	22	2.7	1.3	22	3.5
210hl	210.1	8.2	0.4	2	5.9	13	227	523	3745	100	15	2.5	0.9	24	2.4

210pvt	210.2	8.3	0.5	1.9	6.2	11	169	554	3625	139	22	2.2	1	24	1.9
211	211	8.4	0.4	1.8	3.7	6	180	501	3893	92	13	2.2	0.8	25	1.9
300		8.5	0.4	1.9	6.5	24	373	536	3692	119	19	2.5	1.3	24	3.9
301		8.1	0.4	2	7.6	43	472	540	3071	137	22	2.1	1	22	5.7
302a		8.1	0.4	2	9.4	36	408	483	3344	104	19	2.1	0.9	22	5
303a		8.1	0.5	2.1	10.7	34	455	508	3090	120	31	2.1	1	21	5.5
304		8.2	0.4	2	5.5	45	604	587	3427	94	16	2.9	1.2	24	6.5
305		8.1	0.4	2.3	6.2	41	600	583	3251	100	18	2.4	1.3	23	6.8
306		7.8	0.3	2.5	5.5	30	546	527	2828	69	12	2.3	0.8	20	6.9
307		8	0.4	2	3.8	80	672	558	3311	80	15	3.4	1.2	23	7.6
308		8.1	0.4	1.9	3.3	40	464	547	3282	92	13	2.4	1	23	5.5
309		8.2	0.4	2	4.4	33	450	503	3464	78	15	2.2	1	23	5
400		8.1	0.5	2.1	5.9	18	356	620	3281	158	29	1.4	1.3	23	4
401		8	0.4	2	5.5	24	332	550	2948	94	10	1.8	0.8	21	4.3
402		8.4	0.5	1.8	4	19	169	627	3911	127	21	1.7	1.0	26	1.7
403		8.3	0.4	1.9	4	27	282	579	3638	107	14	1.8	1	24	3.1
404		8.3	0.5	1.7	8.1	16	238	611	3778	134	28	1.7	1.1	25	2.4
405		8	0.5	2	14.6	26	383	573	3661	98	18	1.5	1.1	24	4.2
420		8.2	0.5	2.3	12.1	76	907	674	3564	144	26	2.2	1.8	26	8.8
421		8.1	0.4	2.2	4.5	50	774	563	3090	121	24	1.8	1.5	23	8.8
422		8.3	0.5	2.2	7.0	51	674	602	3258	155	31	1.8	1.7	23.7	7.3
422	422dry	8.2	0.4	2.1	8.3	42	685	485	3000	106	26	1.5	1.4	21.3	8.2
423		7.9	0.5	2.1	26	64	714	520	3115	104	19	3.5	1.3	22	8.3
430		8.4	0.5	1.8	6.8	29	272	589	3390	133	29	1.7	1.4	23	3
431		8.3	0.5	2.2	6.3	22	369	583	3319	167	35	1.9	1.1	23	4.2
432		8.3	0.5	2	11.1	22	773	622	3286	161	18	1.6	1.3	24	8.2
433		8.3	0.5	2.1	14.4	38	816	563	3560	157	18	2.3	1.3	25	8.3

434		8.4	0.4	1.7	2	16	214	546	3585	81	16	1.3	0.8	23	2.4
435		8.1	0.3	1.9	6.9	25	521	474	2402	50	7	1.2	1.1	18	8
440		8.3	0.4	1.7	4	25	239	627	3801	110	15	1.7	1.2	25	2.4
441		8	0.4	2.2	6.6	103	548	541	3094	85	12	4	1.2	22	6.5
442		8.2	0.4	1.8	3.3	14	270	615	3420	98	16	1.4	0.9	23	3
443		8.4	0.4	1.9	5.2	25	323	549	3332	119	17	1.6	1.3	23	3.7
444		8.3	0.4	2.2	5.6	19	657	557	3665	81	8	0.8	1.2	25	6.7
450		8	0.4	1.7	3.2	10	380	542	2697	71	15	1.2	0.9	19	5.2
451		8.1	0.5	2	5.4	12	454	619	3605	118	20	1.4	1.1	25	4.8
452		7.6	0.2	1.7	4.1	19	581	467	2094	21	3	0.7	0.9	16	9.4
500		8.4	0.5	2.1	15.4	69	712	578	3,496	146	32	3.3	1.6	25	7.4
501		8.2	0.5	2.1	17.3	26	646	599	3416	145	24	1.7	1.2	24	6.8
502		8	0.5	2.4	20.5	43	853	573	3415	109	17	2.7	1	25	8.9
503		8.3	0.5	1.9	9	49	634	660	3701	143	25	2.8	1.3	26	6.2
504		8.4	0.5	1.8	7.7	14	492	618	3430	161	21	1.6	1.2	24	5.3
505		8	0.8	2.3	87.9	32	833	580	3533	143	28	2.5	1.3	25	8.4
506		8.1	0.5	2	9.4	30	520	578	3351	118	15	2.5	1	23	5.8
507		8.2	0.5	2	9	33	520	597	3517	146	22	2.3	1.1	25	5.5
601	610 or field n of nd	7.97	0.44	2.35	12.12	81.2	540	588	3003	115	15	2.17	1.19	21.82	6.42
700	603	8.3	0.4	1.7	9.7	8	211	550	3623	105	20	1.8	0.9	24	2.3
701	604	8.2	0.4	1.8	9.6	9	229	589	3632	114	16	1.8	1	24	2.4
702	602	8.5	0.5	1.8	10.6	11	214	558	3462	134	17	1.4	1	23	2.4
703	601	8.3	0.5	1.6	8.5	5	227	585	3939	118	21	1.1	1	26	2.3

Stukenholtz Laboratory, Inc.

2924 Addison Ave. E., P.O. Box 353 Twin Falls, ID 83303
208.734.3050, Fax: 734.3919 www.stukenholtz.com

NEIBLING, MARSHA

Compost Analysis

Grower: HORIZON

Nutrients	Analysis DryWt. Basis	Ib./Ton on As Recv'dBasis
Sample ID.: COMPOST		
Total N, %	1.45	22.65
Total C, %	12.67	197.91
C:N Ratio	8.7:1	
Nitrate N, ppm	888	1.39
P205, %	0.92	14.37
K2 O, %	2.10	32.80
Calcium, %	3.98	62.17
Magnesium, %	0.92	14.37
Sulfur, %	0.31	4.84
Zinc, ppm	111	0.173
Iron, ppm	7240	11.31
Manganese, ppm	301	0.470
Copper, ppm	178	0.280
Boron, ppm	27	0.042
Sodium, %	0.27	4.217
pH	8.4	
Salts as EC, mmhhos	5.2	
NH4-N, ppm	176	
Dry Matter	78.1	1,562

STUKENHOLTZ LABORATORY INC.

MANURE ANALYSIS RESULTS:

Dealer: MARSHA NEIBLING
3265 EAST 3500 NORTH
KIMBERLY, ID 83341

Report #: 74338
Date received: 10/24/2012
Date Reported 10/29/2012

Sample I.D: HORIZON LIQUID

Nutrients Analysed	Analysis As Received	lb/T As Received	lb/Acre Inch As Received
CARBON %	0.84	16.8	1903.4
NH4-N, ppm	382	0.76	86.56
TOTAL N (TKN)%	0.09	1.8	203.9
C:N RATIO	9.3:1		
NITRATE-N ppm	15	0.03	3.40
P_2O_5, %	0.02	0.4	45.3
K_2O, %	0.1	2.0	226.6
CALCIUM, %	0.07	1.4	158.6
MAGNESIUM, %	0.03	0.6	68.0
SULFUR, %	0.02	0.4	45.3
ZINC, ppm	12	0.02	2.72
IRON, ppm	10	0.02	2.27
MANGANESE, ppm	5	0.01	1.13
COPPER, ppm	13	0.026	2.95
BORON, ppm	15	0.030	3.40
SODIUM, %	0.0044	0.1	10.0
DRY MATTER, %			
pH	7.7		
SALTS as EC mmhos/cm	7.2		

APPENDIX D. CROP SPECIFIC GUIDELINES

S-ID, Alfalfa, Hay, Cut Immature, Irrigated
UNIVERSITY OF IDAHO INFORMATION

SOIL SAMPLING
Environmental concerns have brought nutrient management in agriculture under increased scrutiny. A goal of sound nutrient management is to maximize the proportion of applied nutrients that is used by the crop (nutrient use efficiency). Soil sampling is a best management practice (BMP) for fertilizer management that will help improve nutrient use efficiency and protect the environment.
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THE SUBSAMPLES should be thoroughly mixed in a clean plastic bucket, keeping the first-foot samples separate from the second-foot samples. About one pound of soil from each depth's composite sample should then be placed in a separate plastic-lined sampling bag. All requested information including grower's name, field identification, date, and previous crop should be provided with the sample. Soil samples should not be stored under warm conditions because microbial activity can change the extractable nitrate (NO3-N) and (NH4-N) concentrations. Accordingly, soil samples should be submitted to a local soil testing lab as quickly as possible to provide for accurate soil testing results.
IF SIZABLE AREAS OF THE FIELD DIFFER in productivity or visual appearance, crop yield and quality the field may benefit from variable-rate fertilization. Current site-specific soil sampling and fertilizer application technologies provide useful options for providing optimal nutrient availability throughout the field. Information on soil nutrient mapping and variable-rate fertilization can be obtained by contacting an extension soil fertility specialist, your local county ag extension educator, crop advisor, or ag consultant. For more detailed information about soil sampling, refer to EXT 704, (Soil Sampling).

FERTILIZER GUIDE
Nutrient requirements for alfalfa are relatively high compared to many other crops commonly grown in Idaho. Each ton of alfalfa hay removes about 60 lb nitrogen (N) per

acre, 50 lb potassium (K) per acre, 30 lb calcium (Ca) per acre, 8 lb phosphorus (P) per acre, and about 6 lb per acre of both sulfur (S) and magnesium (Mg). Requirements for phosphorus and potassium fertilizers are much higher than for S, manganese (Mn), zinc (Zn), iron (Fe), and boron (B).

NITROGEN (N)

Essentially all nitrogen required by established alfalfa is provided by the symbiotic relationship with N-fixing Rhizobium bacteria and N mineralized from soil organic matter. Top dressed N usually does not improve yield, quality, or vigor of established stands. However, applications of 20 to 40 lb N per acre may be helpful during stand establishment prior to nodulation of the roots. Applied N would most likely be needed following small grain production in which the residue is returned to the soil. Application of larger amounts may inhibit nodulation, decrease symbiotic N fixation, and encourage grass weeds, thereby reducing alfalfa growth or quality when harvested. Alfalfa receiving appreciable amounts of animal manures, dairy effluent, or other organic N sources will also have reduced N fixation. The probability of an N response is usually greatest on coarse-textured soils with low organic matter content. Nitrogen fertilizer may be required for maximum alfalfa production and quality if the roots are poorly nodulated. Poor nodulation as well as poor Rhizobial activity and N-fixing capacity can result from a number of factors, including lack of proper seed inoculation at planting, diseases, insects, water deficits, nutrient deficiencies or toxicities, or other soil physical or chemical conditions that reduce the effectiveness of the Rhizobium inoculant. Poor inoculation results from not using inoculant, using inoculant that has lost its viability (expired shelf life), or using Rhizobium inoculant strains that are not effective. Poor inoculation, nodulation, or Rhizobial effectiveness is indicated when alfalfa protein is low (less than 18%) when cut at the early bloom stage. Healthy Rhizobium nodules should be pink when cut open if they are effectively fixing atmospheric N. If nodulation or Rhizobial effectiveness is limited by pests, water deficits, or soil conditions such as salinity, sodicity, nutrient deficiencies, or soil compaction, then attempts should be made to correct the problem through appropriate management practices. For more information on proper inoculation of alfalfa, refer to CIS 838, (Inoculation of Legumes in Idaho).

Alfalfa is sometimes used to scavenge nutrients from soils receiving excessive animal manure or other biological waste applications. An alfalfa crop yielding 6 tons per acre can remove up to 360 lb of N per acre. However, excessive nitrogen uptake can increase the forage nitrate toxicity hazard for dairy and beef cattle. In addition, animal manure applications can promote grass and weed growth, which in turn can also increase the potential for nitrate toxicity if the population of the noxious weed Kochia increases.

Producers sometimes plant a companion crop when establishing alfalfa in order to increase the productivity of the first cutting. However, this practice is not recommended because the alfalfa stand typically is reduced by competition from the companion crop. If growers plant alfalfa with a companion crop, both crops compete for the available N. Under these conditions, N rates of 30 to 40 lb per acre are suggested if available soil N does not exceed 60 to 80 lb per acre.

PHOSPHORUS (P)

Adequate phosphorus availability is important for maintaining plant health, winter

hardiness, and optimum root, stem, and leaf growth. Since phosphorus is relatively immobile in soil, P fertilizer should be incorporated into the soil prior to planting to raise soil P concentrations to optimum levels for early plant growth. The phosphorus recommendations presented are based on the soil test P concentration and free lime content in the top foot of soil, and the yield potential. Significant amounts of free lime in the soil will make less phosphorus available to plants as it precipitates soil solution P. Top dressed P applications can also be effective but should be made following harvest in the fall or in the spring before regrowth in order to maximize soil contact. Knifing ammonium polyphosphate (10-34-0) into the soil or applying surface bands in the fall or spring are also effective P fertilization methods for alfalfa. As the stand ages and plant density decreases, the ability of the alfalfa root system to take up P diminishes due to decreased soil P concentrations and root activity. Under these conditions, smaller P rates applied more frequently may increase P uptake efficiency. Effective sources of P for alfalfa include monoammonium phosphate (11-52-0), triple superphosphate (0-45-0), ammonium polyphosphate (10-34-0), and phosphoric acid. Fertilizer P can be broadcast as 11-52-0 or applied through the irrigation system as 10-34-0 with equal effectiveness. Phosphorus sources should be selected on the basis of cost, local availability, and equipment requirements.

POTASSIUM (K)

Alfalfa has a high potassium requirement. A crop of 8 tons per acre will remove about 480 lb of K2O per acre. Most Idaho soils and surface irrigation waters are naturally high in K. However, K deficiencies can develop in intensively cropped fields, particularly those fields cropped to alfalfa for many years. Sandy soils are generally more prone to developing K deficiencies than silt loam or clay soils and therefore have a higher probability of responding to K fertilization. Potassium movement in soils is limited, although it is more mobile than P. Like phosphorus, potassium fertilizer recommendations are based on calibrated relationships between soil test concentrations in the top foot of soil and yield response. Soil test K should generally be in the range of 160 to 200 ppm for optimum alfalfa yield. Potassium fertilizer should also be incorporated during seedbed preparation prior to establishment, or broadcast in the fall or early spring on established stands. Potassium chloride (0-0-60), potassium sulfate (0-0-52), K-Mag, and various liquid K fertilizers are all effective K sources for alfalfa. Potassium applications exceeding 300 lb K2O per acre should be split between fall and spring to avoid salt damage. Excessive K applications should be avoided since alfalfa will remove substantially more K than it needs for maximum yield. Excessive K concentrations in alfalfa can contribute to milk fever in dairy cattle.

SULFUR (S)

Sulfur is a key contributor to alfalfa yield and quality. Sulfur requirements for alfalfa vary with soil texture, leaching losses, soil test SO4-S concentration, and S content of the irrigation water. About 30 to 40 lb of SO4-S should be applied before planting to soils containing less than 10ppm SO4-S in the top foot of soil. This amount should provide adequate soil S for several years, provided the SO4-S is not leached from the rooting depth. The SO4-S form is mobile and can be leached to lower soil profile depths. For established alfalfa, sampling to a depth of two feet will provide a more accurate indication of S availability to alfalfa roots beyond the first foot. Areas irrigated with water from the Snake

River or streams fed by return flow should have adequate S for alfalfa production. High rainfall areas, mountain valleys, and foothills are more likely to have S deficiencies, particularly on course-textured soils with low organic matter content. Sulfur fertilizer sources should be carefully selected because elemental S must be converted to SO4-S by soil microorganisms before plant roots can take it up. Conversion of elemental S to SO4-S may take several months in warm, moist soil. Consequently, elemental S fertilizers usually cannot supply adequate levels of S to alfalfa in the year that it is applied. However, elemental S fertilizers can supply considerable S during the year following application. Sulfate-sulfur sources such as gypsum (calcium sulfate), ammonium sulfate (21-0-0), or potassium sulfate (0-0-52-18) are recommended to correct S deficiencies during the year of application.

SECONDARY NUTRIENTS AND MICRONUTRIENTS

CALCIUM (Ca) and MAGNESIUM (Mg) deficiencies in alfalfa are rare in the irrigated areas of southern Idaho. Most soils in the Snake River plain have adequate amounts of Ca and Mg for alfalfa production, although low soil Mg concentrations are sometimes encountered on very sandy soils that have been heavily fertilized with K for long periods. Under these conditions, applications of MgSO4 or K-Mag at 20 to 40 lb of Mg per acre may provide a benefit. Micronutrient applications should be based on recent soil test results.

BORON (B) deficiencies can usually be corrected by applying 2 to 3 lb of B per acre for the duration of the crop. However, on very sandy soils, or high rainfall areas where soils are subject to excessive leaching of B, annual applications of 1/2 to 1 lb of B per acre may be more Sulfur effective. Commonly used forms of B include boric acid, Borax, and sodium borate.

ZINC (Zn), MANGANESE (Mn), and IRON (Fe) deficiencies can be corrected by applying 5 to 10 lb per acre of the required nutrient using Zn, Mn, or Fe sulfates or other soluble forms.

MOLYBDENUM (Mo) availability is generally adequate in the alkaline soils that are prevalent in the irrigated areas of southern Idaho.

TISSUE TESTING

Plant tissue testing provides an effective means of evaluating the nutrient status of an established alfalfa stand. Samples should be collected from about 20 to 30 plants at early bloom in representative areas of the field that are free from water stress or obvious pest problems. The top six inches of the stem should be sampled and sent immediately to a soil testing lab for analysis. Sufficiency ranges for the various nutrients are presented below. Nutrient concentrations below these ranges indicate a need for supplemental fertilization. When nutrient deficiencies are identified during the growing season, the deficiencies can often be corrected by injecting water-soluble fertilizers through the sprinkler system. Liquid forms of N, P, K, S, and micronutrients are commonly available in Idaho and should be selected on the basis of cost relative to dry fertilizers and ease of application. If alfalfa is furrow irrigated, foliar sprays can be used to correct micronutrient deficiencies but avoid foliar applications of N, P, K, and S at high rates that can cause foliar burning.

Contact your County Extension Agent if you have any questions regarding the interpretation of this information or for further information on your local needs.

S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
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particularly on course-textured soils with low organic matter content. Sulfur fertilizer sources should be carefully selected because elemental S must be converted to SO4-S by soil microorganisms before plant roots can take it up. Conversion of elemental S to SO4-S may take several months in warm, moist soil. Consequently, elemental S fertilizers usually cannot supply adequate levels of S to alfalfa in the year that it is applied. However, elemental S fertilizers can supply considerable S during the year following application. Sulfate-sulfur sources such as gypsum (calcium sulfate), ammonium sulfate (21-0-0), or potassium sulfate (0-0-52-18) are recommended to correct S deficiencies during the year of application.

SECONDARY NUTRIENTS AND MICRONUTRIENTS

CALCIUM (Ca) and MAGNESIUM (Mg) deficiencies in alfalfa are rare in the irrigated areas of southern Idaho. Most soils in the Snake River plain have adequate amounts of Ca and Mg for alfalfa production, although low soil Mg concentrations are sometimes encountered on very sandy soils that have been heavily fertilized with K for long periods. Under these conditions, applications of MgSO4 or K-Mag at 20 to 40 lb of Mg per acre may provide a benefit. Micronutrient applications should be based on recent soil test results.

BORON (B) deficiencies can usually be corrected by applying 2 to 3 lb of B per acre for the duration of the crop. However, on very sandy soils, or high rainfall areas where soils are subject to excessive leaching of B, annual applications of 1/2 to 1 lb of B per acre may be more Sulfur effective. Commonly used forms of B include boric acid, Borax, and sodium borate.

ZINC (Zn), MANGANESE (Mn), and IRON (Fe) deficiencies can be corrected by applying 5 to 10 lb per acre of the required nutrient using Zn, Mn, or Fe sulfates or other soluble forms.

MOLYBDENUM (Mo) availability is generally adequate in the alkaline soils that are prevalent in the irrigated areas of southern Idaho.

TISSUE TESTING

Plant tissue testing provides an effective means of evaluating the nutrient status of an established alfalfa stand. Samples should be collected from about 20 to 30 plants at early bloom in representative areas of the field that are free from water stress or obvious pest problems. The top six inches of the stem should be sampled and sent immediately to a soil testing lab for analysis. Sufficiency ranges for the various nutrients are presented below. Nutrient concentrations below these ranges indicate a need for supplemental fertilization. When nutrient deficiencies are identified during the growing season, the deficiencies can often be corrected by injecting water-soluble fertilizers through the sprinkler system. Liquid forms of N, P, K, S, and micronutrients are commonly available in Idaho and should be selected on the basis of cost relative to dry fertilizers and ease of application. If alfalfa is furrow irrigated, foliar sprays can be used to correct micronutrient deficiencies but avoid foliar applications of N, P, K, and S at high rates that can cause foliar burning.

Contact your County Extension Agent if you have any questions regarding the interpretation of this information or for further information on your local needs.

S-ID, Barley-Spring
UNIVERSITY OF IDAHO INFORMATION

SOIL SAMPLING
Environmental concerns have brought nutrient management in agriculture under increased scrutiny. A goal of sound nutrient management is to maximize the proportion of applied nutrients that is used by the crop (nutrient use efficiency). Soil sampling is a best management practice (BMP) for fertilizer management that will help improve nutrient use efficiency and protect the environment.
SOIL SAMPLING is also one of the most important steps in a sound crop fertilization program. Poor soil sampling procedures account for more than 90 percent of all errors in fertilizer recommendations based on soil tests. Soil test results are only as good as the soil sample. Once you take a good sample, you must also handle it properly for it to remain a good sample. A good soil testing program can be divided into four operations: (1) taking the sample, (2) analyzing the sample, (3) interpreting the sample analyses, and (4) making the fertilizer recommendations.
GOOD SOIL SAMPLING starts with recognizing the soil fertility varies among and within fields. Soil sampling for plant nutrients should be done one to two weeks before the anticipated fertilizer application or planting date. To adequately characterize nutrient availability in a field, each soil sample submitted to a lab should consist of a composite of at least 20 individual subsamples representing the field's major soil characteristics. To determine Nitrogen availability, separate soil samples should be collected from the 0- to 12-inch depth and the 12- to 24-inch depth. All other nutrients require only a 0- to 12-inch sample. Samples should not be collected from poor production areas or wet spots unless specific recommendations are desired for those areas.
THE SUBSAMPLES should be thoroughly mixed in a clean plastic bucket, keeping the first-foot samples separate from the second-foot samples. About one pound of soil from each depth's composite sample should then be placed in a separate plastic-lined sampling bag. All requested information including grower's name, field identification, date, and previous crop should be provided with the sample. Soil samples should not be stored under warm conditions because microbial activity can change the extractable nitrate (NO3-N) and (NH4-N) concentrations. Accordingly, soil samples should be submitted to a local soil testing lab as quickly as possible to provide for accurate soil testing results. IF SIZABLE AREAS OF THE FIELD DIFFER in productivity or visual appearance, crop yield and quality the field may benefit from variable-rate fertilization. Current site-specific soil sampling and fertilizer application technologies provide useful options for providing optimal nutrient availability throughout the field. Information on soil nutrient mapping and variable-rate fertilization can be obtained by contacting an extension soil fertility specialist, your local county ag extension educator, crop advisor, or ag consultant. For more detailed information about soil sampling, refer to EXT 704, (Soil Sampling).

FERTILIZER GUIDE

NITROGEN (N)
Nitrogen application rates depend upon previous crops, previous N fertilizer additions, and release of N from organic matter, soil type, irrigation management and length of growing

season. Enough N fertilizer should be applied to obtain maximum economic yield without significantly increasing protein content of standard barley varieties.
TOTAL N REQUIREMENTS BASED ON POTENTIAL YIELD - Fertilizer N rates should be used which correspond to the yield growers can reasonably expect under their soil and management conditions. The historical barley yield obtained by a grower in a specific field or area generally provides a fair approximation of yield potential given a grower's traditional crop management. Projected changes in crop management (i.e. improved variety, better disease and weed control) designed to appreciably increase production may require adjustment of yield potential upward. Research has shown that the available N required to produce a good barley yield depends on a variety of crop management practices. Factors such as weed, insect and disease control as well as irrigation, planting date and soil type can influence the N required by barley for maximum yield.
AVAILABLE NITROGEN - Available N in the soil includes mineralizable N (released from organic matter during the growing season) inorganic N as nitrate (N03-N) and ammonium (NH4-N), and N credits from previous cropping or manures. Each component of available N must be estimated for accurate determination of optimum fertilizer N rates.
MINERALIZABLE NITROGEN - Soils vary in their capacity to release N from organic matter during the growing season. The amount of N released depends on such factors as soil type, soil moisture, soil temperature, previous crop, and the history of fertilizer N applied. While soil organic matter content is frequently used to estimate annual mineralizable N contributions, in southern Idaho irrigated soils organic matter does not accurately predict the amount of N that is mineralized.
INORGANIC NITROGEN - Residual soil inorganic N (N03, NH4) can be evaluated most effectively with a soil test. Soil samples should be collected in foot increments to a depth of two feet, unless roots are restricted by dense soil layers or high water tables. Ammonium is generally low in preplant soil samples and thus contributes little to available N. However, it can be as high as or higher than N03-N. NH4-N should be determined along with N03-N, especially when there is reason to expect the presence of appreciable NH4-N, such as recent ammonium N fertilizer applications. Soil samples should be collected before seeding in the spring to represent the area to be fertilized.
NITROGEN FROM PREVIOUS CROP RESIDUES - Nitrogen associated with decomposition of previous crop residues should also be considered when estimating available N. Residues that require additional N for decomposition include cereal straw and mature corn stalks. Research has shown that 15 pounds of additional N are needed per ton of straw returned to the soil, up to a maximum of 50 pounds. For more information on compensating for cereal residues, refer to CIS 825, (Wheat Straw Management and Nitrogen Fertilizer Requirements). Row crop residues (potatoes, sugarbeets, and onions) generally do not require additional N for decomposition. Consequently, these residues have little effect on the N needs of barley. Legume residues from beans, peas, and alfalfa can release appreciable N during the following crop season that may not be reflected by the preplant soil test. This N is derived from the decomposition of both plant tops and nodulated root systems.
NITROGEN FROM MANURES - Soils in which barley is grown occasionally receive animal manures or lagoon wastes. Nutrient contributions from these sources should also be taken into consideration when estimating available N for the next season. Manures can preclude the need for any fertilizer, depending on the rate applied and their nutrient composition. Manures can vary appreciably depending on the animal, how the manure is processed, and

the kind and extent of bedding material. For the most accurate estimate of fertilizer equivalent values, the manure should be analyzed for its nutrient content.
IRRIGATION WATER - Irrigation waters derived from deep wells are generally low in N. More shallow wells can have significant levels of nitrogen because of leaching of nitrogen from impacts from commercial fertilizer use, animal waste, and improperly functioning septic systems. Irrigation waters from most districts are also low in N when diverted from its source. Background levels of N from original sources are generally about 2 parts per million (ppm). The more return flow included in diverted water sources, the higher the N content. Return flows may include N dissolved when irrigation waters pass through fields high in residual or recently added fertilizer N as well as from soluble fertilizer N applied with the irrigation water. Most irrigation districts should know the N content of the water they divert. Contact them for this information to determine the levels of N added with your irrigation water. However, since irrigation water N levels are influenced by upstream management, if you use irrigation water that receives runoff after it is diverted, only a water test can accurately evaluate the N added with irrigation waters. For each ppm or milligrams per liter (mg/L) of N reported in the water sample, multiply by 2.7 to get the N added per acre foot of water applied. For example, if the water sample contained 10 ppm of N, 3 acre feet of water applied would be the equivalent of 81 pounds of N per acre. Typically, of the water applied with furrow irrigation only 50 percent is retained on the field and the rest runs off the end. The net retention of N applied with furrow irrigation would, therefore, be about half of the water applied or about 40 pounds per acre in this example. If more or less of the irrigation water is retained with each wetting, then growers should adjust the water N contribution accordingly. Excessive irrigation by any method reduces N availability to barley. Additional N may be needed under these conditions. Growers should not use aqua or anhydrous N through a sprinkler irrigation system. Water running soluble N sources with a furrow irrigation system can be an effective means of adding N. Two limitations of this practice are that (1) the application of the N with this method may not be as uniform as desired and (2) runoff containing the N may contaminate downstream surface waters. Growers can minimize the loss of N by shutting off the injection unit before the irrigation water reaches the end of the furrow. This practice should not substitute for careful consideration of N needs while N can be side dressed.
CALCULATION OF N APPLICATION RATES - To calculate the fertilizer N application rate, the following equation is used: Fertilizer application rate (deficit) or Over application of Nitrogen = (Total N required to produce a given yield) - (Mineralizable N) - (Inorganic N measured by the soil test) - (previous crop/residue management) - (Manure Nitrogen) - (Irrigation Water)
TIMING OF NITROGEN APPLICATION - Nitrogen (N) applied in the spring during seedbed preparation will be used more efficiently by the barley plant, especially on sandy soils in areas having heavy winter precipitation. Nitrogen applied to the crop after the boot stage and application of excessive rates of N can result in undesirably high protein levels and may also increase lodging.

PHOSPHORUS (P)
Irrigated spring barley requires adequate soil P for maximum economic yields. Soil testing for P provides a reasonable estimate of available P. Optimum P fertilizer rates depend on both soil test P and soil lime content. Plant maturity may be delayed when soil test P

concentrations are low and free lime content is greater than 10 percent. However, grain yields are usually unaffected when the growing season is sufficient. When banding an ammonium P source (11-52-0) at rates above 20 lb per acre, separate the seed and the fertilizer material by two inches to avoid seedling damage from salts. For a detailed discussion of banding refer to PNW 283, (No-Till and Minimum Tillage Farming: Fertilizer Band Location for Cereal Root Access). Incorporate P fertilizer during seedbed preparation. Solution P, such as ammonium polyphosphate, may be applied through a sprinkler irrigation system. Check the compatibility of the irrigation water and the P material. If precipitates form, decrease the fertilizer concentration or increase the injection time.

POTASSIUM (K) AND CHLORIDE (Cl)
Soil test K is a reasonable indication of available K in southern Idaho soils. Incorporate K during seedbed preparation. Potassium chloride increases yields where take-all root rot is prevalent, regardless of the soil test K level. This response is due primarily to the chloride component. Barley yield may also increase when not infected with take-all if extractable soil Cl is below 30 lb per acre in the first two feet. Low soil Cl has been associated with physiological leaf spot. Soil Cl can be measured with a soil test. If soil test Cl is less than 8 ppm for the first two feet combined, apply 40 lb Cl per acre in the form of potassium chloride. Do not drill band Cl with the seed as germinating seed may be injured by excessive salts.

SULFUR (S)
Sulfur (S) fertilizer needs will vary depending on soil texture, soil organic matter level, leaching losses and sulfur content of irrigation water. Areas irrigated with Snake River water should not experience a shortage of S. High rainfall mountain valley and foothill areas of southern Idaho are most likely to respond to S fertilizer applications. A soil testing less than 8 ppm sulfate-S in the 0- to 12-inch soil depth and soils in areas known to be deficient in S should receive 20 to 40 pounds S/acre.

MICRONUTRIENTS
Micronutrients have not been shown to limit barley production in Southern Idaho. "Shotgun" applications of micronutrient mixtures containing boron (B), copper (Cu), iron (Fe) and manganese (Mn) "for insurance" have not been shown to be economical and are not recommended.

GENERAL COMMENTS
Avoid a heavy first irrigation on spring-planted barley to prevent water-logging the soil which reduces tillering and increases nitrogen leaching losses.

S-ID, Corn-Field, Silage, Irrigated
UNIVERSITY OF IDAHO INFORMATION

SOIL SAMPLING
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SOIL SAMPLING is also one of the most important steps in a sound crop fertilization program. Poor soil sampling procedures account for more than 90 percent of all errors in fertilizer recommendations based on soil tests. Soil test results are only as good as the soil sample. Once you take a good sample, you must also handle it properly for it to remain a good sample. A good soil testing program can be divided into four operations: (1) taking the sample, (2) analyzing the sample, (3) interpreting the sample analyses, and (4) making the fertilizer recommendations.

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FERTILIZER GUIDE

NITROGEN (N)

Nitrogen rates depend upon some of the following factors: previous crop, past fertilizer use, soil type and leaching hazard and realistic yield goal for the grower and the area.

Adequate N is necessary for maximum economic production of irrigated field corn used for silage or grain. Fertilizer N represents by far the largest share of the fertilizer costs for field corn in Idaho. The amount of N required depends on many factors that influence total corn production and quality. These factors include length of growing season, corn hybrid, previous crop, past fertilizer use, soil type, leaching hazard and previous manuring.

Estimates of both the N available to corn during the season and the yield potential of the crop should be considered when determining N fertilizer rates.

TOTAL N REQUIREMENTS BASED ON POTENTIAL YIELD - Fertilizer N rates should be used which correspond to the yield growers can reasonably expect under their soil and management conditions. The historical field corn yield obtained by a grower in a specific field or area generally provides a fair approximation of yield potential given a grower's traditional crop management. Projected changes in crop management (i.e. improved variety, better disease and weed control) designed to appreciably increase production may require adjustment of yield potential upward. Research has shown that the available N required to produce a good field corn yield depends on a variety of crop management practices. Factors such as weed, insect and disease control as well as irrigation, planting date and soil type can influence the N required by corn for maximum yield.

AVAILABLE NITROGEN - Available N in the soil includes mineralizable N (released from organic matter during the growing season) inorganic N as nitrate (N03-N) and ammonium (NH4-N), and N credits from previous cropping or manures. Each component of available N must be estimated for accurate determination of optimum fertilizer N rates.

MINERALIZABLE NITROGEN - Soils vary in their capacity to release N from organic matter during the growing season. The amount of N released depends on such factors as soil type, soil moisture, soil temperature, previous crop, and the history of fertilizer N applied. While soil organic matter content is frequently used to estimate annual mineralizable N contributions, in southern Idaho irrigated soils organic matter does not accurately predict the amount of N that is mineralized.

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NITROGEN FROM PREVIOUS CROP RESIDUES - Nitrogen associated with decomposition of previous crop residues should also be considered when estimating available N. Residues that require additional N for decomposition include cereal straw and mature corn stalks. Research has shown that 15 pounds of additional N are needed per ton of straw returned to the soil, up to a maximum of 50 pounds. For more information on compensating for cereal residues, refer to CIS 825, "Wheat Straw Management and Nitrogen Fertilizer Requirements." Row crop residues (potatoes, sugarbeets, and onions) generally do not require additional N for decomposition. Consequently, these residues have little effect on the N needs of field corn. Legume residues from beans, peas, and alfalfa can release appreciable N during the following crop season that may not be reflected by the preplant soil test. This N is derived from the decomposition of both plant tops and nodulated root

systems.

NITROGEN FROM MANURES - Soils in which field corn is grown occasionally receive animal manures or lagoon wastes. Nutrient contributions from these sources should also be taken into consideration when estimating available N for the next season. Manures can preclude the need for any fertilizer, depending on the rate applied and their nutrient composition. Manures can vary appreciably depending on the animal, how the manure is processed, and the kind and extent of bedding material. For the most accurate estimate of fertilizer equivalent values, the manure should be analyzed for its nutrient content.

IRRIGATION WATER - Irrigation waters derived from deep wells are generally low in N. More shallow wells can have significant levels of nitrogen because of leaching of nitrogen from impacts from commercial fertilizer use, animal waste, and improperly functioning septic systems. Irrigation waters from most districts are also low in N when diverted from its source. Background levels of N from original sources are generally about 2 parts per million (ppm). The more return flow included in diverted water sources, the higher the N content. Return flows may include N dissolved when irrigation waters pass through fields high in residual or recently added fertilizer N as well as from soluble fertilizer N applied with the irrigation water. Most irrigation districts should know the N content of the water they divert. Contact them for this information to determine the levels of N added with your irrigation water. However, since irrigation water N levels are influenced by upstream management, if you use irrigation water that receives runoff after it is diverted, only a water test can accurately evaluate the N added with irrigation waters. For each ppm or milligrams per liter (mg/L) of N reported in the water sample, multiply by 2.7 to get the N added per acre foot of water applied. For example, if the water sample contained 10 ppm of N, 3 acre feet of water applied would be the equivalent of 81 pounds of N per acre. Typically, of the water applied with furrow irrigation only 50 percent is retained on the field and the rest runs off the end. The net retention of N applied with furrow irrigation would, therefore, be about half of the water applied or about 40 pounds per acre in this example. If more or less of the irrigation water is retained with each wetting, then growers should adjust the water N contribution accordingly. Excessive irrigation by any method reduces N availability to field corn. Additional N may be needed under these conditions. Growers should not use aqua or anhydrous N through a sprinkler irrigation system. Water running soluble N sources with a furrow irrigation system can be an effective means of adding N. Two limitations of this practice are that (1) the application of the N with this method may not be as uniform as desired and (2) runoff containing the N may contaminate downstream surface waters. Growers can minimize the loss of N by shutting off the injection unit before the irrigation water reaches the end of the furrow. This practice should not substitute for careful consideration of N needs while N can be side dressed.

CALCULATION OF N APPLICATION RATES - To calculate the fertilizer N application rate, the following equation is used: Fertilizer application rate (deficit) or Over application of Nitrogen = (Total N required producing a given yield) - (Mineralizable N) - (Inorganic N measured by the soil test) - (previous crop/residue management) - (Manure Nitrogen) - (Irrigation Water)

TIMING OF NITROGEN APPLICATION - Coarse-textured soils, including sandy loams, loamy soils and sands, may lose N from leaching. For these soils, side dress a portion of the N at the time of the last cultivation. Sprinkler irrigation of corn under center pivots provides increased flexibility for providing N during the season. With sprinklers N can be injected into the system and applied with the water. On silt loam soils, split applications of N have not proven more effective as long as preplant N is adequately incorporated. High N rates (approaching 300 pounds per acre) broadcast and incorporated before planting may reduce early season corn growth. If high N rates are needed, split applications should be considered. High plant populations (above 28,000 to 30,000) and early plantings of longer season hybrids in the Treasure Valley will respond to high N rates provided there are no other limiting factors. High N rates will not compensate for reductions in stand or delayed plantings. High plant populations of field corn are more susceptible to N shortages because of greater competition among plants for limited N. Side dressing may cause root pruning depending on plant size, distance of shank from the row and placement depth. High N rates (above 300 pounds per acre) broadcast and incorporated before planting may reduce early season corn growth. If high N rates are needed, split applications should be considered. On sandy textured soils subject to leaching, side dress a portion of the N at the time of the last cultivation. Under sprinkler irrigations, N can be injected through the lines throughout the season. On silt loam soils, split applications of N have not proven more effective as long as preplant N is adequately incorporated.

PHOSPHORUS (P)
Adequate phosphorus is necessary for maximum production of field corn. The soil test for P is based on samples collected from the first foot of soil. The soil is extracted with sodium bicarbonate. Economic response to fertilizer P is more likely with cooler soil temperatures and soils with high lime content, particularly when planting long season hybrids. Phosphorus is an immobile nutrient that does not move appreciably from where it is placed. It should be mixed into the seedbed or banded within easy reach of the seedling roots before or during the planting operation.

POTASSIUM (K)
Field corn requires adequate potassium for optimum growth. Soil test K can be useful in determining the need for K fertilizers. The soil sample is taken from the first foot of soil and extracted with sodium bicarbonate. Fertilizer K rates are based on soil test.

SULFUR (S)
The major corn-growing regions in Idaho should not experience shortages of S. Areas with S deficiencies include some irrigated areas where both the soil and irrigation water are low in S. Snake River water is known to have high S concentrations. Coarse-textured soils including sandy loams, loamy sands and sands would be more susceptible to S deficiencies than silt loam soils. Where the need for S is evident, use 30 pounds per acre of sulfate-sulfur (S04).

MICRONUTRIENTS
1) Zinc (Zn) deficiencies occur primarily on soils that are eroded, leveled or where the exposed subsoil is higher in lime. The DTPA test on soil samples collected from the first foot

can be used for identifying Zn fertilizer needs. Apply 10 pounds of Zn per acre when the soil test measures less than 0.6 ppm.

2) Other micronutrients have not been shown to limit corn production. "Shotgun" applications of micronutrient mixtures containing boron (B), copper (Cu), iron (Fe) and manganese (Mn) "for insurance" have not been shown to be economical and are not recommended.

SALINITY (SALTS)
Field corn has a low to moderate tolerance to accumulated salts. Soils with total salt readings above 3 or 4 mmhos/cm can be cropped effectively. Readings up to 6 are also satisfactory although more careful water management may be required.

S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
UNIVERSITY OF IDAHO INFORMATION

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FERTILIZER GUIDE

Lack of adequate fertilizer, improper irrigation management, poor stands, non-adapted plant species and poor grazing management are the major causes of low forage production in irrigated pastures. When properly managed, pastures will respond to fertilization and produce large quantities of high-quality forage and livestock products. Irrigated pastures are typically composed either of grass-legume mixtures or grasses alone. The composition of the pasture can be changed by fertilizer management and grazing method. Adapted and high-quality grasses for irrigated pastures include brome grass and orchard grass for well-drained soil, fescue and wheatgrass for saline soils and creeping meadow foxtail and reed canary grass for wet soil. These grasses make excellent summer regrowth. Highest producing grass-legume mixtures usually include one or more of the above grasses with a well-adapted legume variety. An adapted legume variety should have good winter hardiness and resistance to insects and diseases.

NITROGEN (N)
Nitrogen rates depend upon some of the following factors: previous crop, past fertilizer use, soil type and leaching hazard and realistic yield goal for the grower and the area. Grass pastures have responded well to nitrogen (N) fertilizer applications up to 150 pounds N per acre. The N rate depends upon the length of frost-free growing season and the number of cuttings or grazing periods. Production potential increases as the frost-free growing period is extended. Split applications of N fertilizer maintain a more uniform level of forage production through summer and fall. Broadcast 30 to 50 pounds N per acre per application after each cutting or grazing cycle, and irrigate to move N into the plant root zone. As the amount of legume increases in a grass/legume mixture, the need for N fertilizer decreases. When the legume composes over 60 percent of the mixture, responses from N are limited. Nitrogen applications will reduce the quantity of legume in a mixed species stand. Inoculation of legumes when the stand is established will reduce the need for N fertilization when legumes dominate the stand composition.

PHOSPHORUS (P)
Intensively managed, high-producing pasture may respond to phosphorus (P) fertilization. Grasses generally have a low P requirement, and legumes generally have a high P requirement. Thus, P fertilizer applications tend to encourage legumes. Phosphorus movement in soils is limited, so P fertilizer needs to be placed in the rooting zone. Apply phosphorus during seedbed preparation whenever possible. Top-dress established pastures

with P fertilizer, preferably in the fall.

POTASSIUM (K)
Grasses have moderate potassium (K) requirements, and legumes have high K requirements. Idaho soils are usually high in natural K. Irrigation water contains K except in mountain streams. Potassium movement in soils is limited, though not to the same extent as that of phosphorus. Incorporate K during seedbed preparation or broadcast in the fall on established stands.

SULFUR (S)
Sulfur demand is greater for legumes than grasses. Sulfur requirements for grass and legumes will vary with soil texture, leaching losses, S soil test and S content of irrigation water. Apply 30 pounds of S to soil testing less than 10 ppm sulfate-sulfur (S04-S) in the plow layer. Areas irrigated with water from the Snake River and other streams fed by return flow should have adequate S. High rainfall areas, mountain valleys and foothill areas are likely areas for S deficiencies. Sulfur sources should be carefully selected due to variation in its availability to plants. Elemental sulfur must be converted so sulfate (S04) form by soil micro-organisms before it can be taken up by plants. Conversion of elemental S to S04 may take several months in warm moist soils. Elemental S fertilizers cannot supply adequate levels of S the year of application. However, these elemental S sources can supply considerable S the year after the initial application. Sulfate-sulfur sources are recommended to alleviate deficiencies the year of application.

MICRONUTRIENTS
Deficiencies of micronutrients such as zinc (Zn), copper (Cu), manganese (Mn) and iron (Fe) have not been observed on irrigated pastures in southern Idaho. Grasses and legumes are not sensitive to low levels of micronutrients as are row crops such as beans and corn. Boron (B) deficiencies may be observed on legumes in gravelly textured soils. If the soil tests less than 0.25 ppm B, apply 1 to 3 pounds of B per acre. Do not use higher rates because B is toxic to plants in excessive amounts.

GENERAL COMMENTS
1. Nitrogen and phosphorus are the elements needed most on Idaho irrigated pastures. Potassium, sulfur, zinc and boron may be needed. Their need is best determined by soil and plant tissue tests.

2. Legume population in a grass-legume mixture is reduced by nitrogen fertilization and increased by phosphorus and potassium addition when these nutrients are low in the soil.

3. Forage from properly fertilized grass or mixed grass-legume pastures has higher protein, providing higher quality livestock feed than unfertilized pastures.

4. Irrigated pastures make good use of sloping land, stony soils and shallow soils which are less desirable for row crops. Pastures reduce soil erosion during irrigation on sloping land.

5. Fertilizers are only one part of pasture management. Pastures are most profitable when

plant selection, irrigation and harvest techniques are not limiting production.

6. Rotational grazing will provide more forage and greater returns than continuous grazing.

Contact your County Extension Agent if you have any questions regarding the interpretation of this information or for further information on your local needs.

S-ID, Pasture-Poor Condition, Root Depth 2 feet, Irrigated
UNIVERSITY OF IDAHO INFORMATION

SOIL SAMPLING
Environmental concerns have brought nutrient management in agriculture under increased scrutiny. A goal of sound nutrient management is to maximize the proportion of applied nutrients that is used by the crop (nutrient use efficiency). Soil sampling is a best management practice (BMP) for fertilizer management that will help improve nutrient use efficiency and protect the environment.
SOIL SAMPLING is also one of the most important steps in a sound crop fertilization program. Poor soil sampling procedures account for more than 90 percent of all errors in fertilizer recommendations based on soil tests. Soil test results are only as good as the soil sample. Once you take a good sample, you must also handle it properly for it to remain a good sample. A good soil testing program can be divided into four operations: (1) taking the sample, (2) analyzing the sample, (3) interpreting the sample analyses, and (4) making the fertilizer recommendations.
GOOD SOIL SAMPLING starts with recognizing the soil fertility varies among and within fields. Soil sampling for plant nutrients should be done one to two weeks before the anticipated fertilizer application or planting date. To adequately characterize nutrient availability in a field, each soil sample submitted to a lab should consist of a composite of at least 20 individual subsamples representing the field's major soil characteristics. To determine Nitrogen availability, separate soil samples should be collected from the 0- to 12-inch depth and the 12- to 24-inch depth. All other nutrients require only a 0- to 12-inch sample. Samples should not be collected from poor production areas or wet spots unless specific recommendations are desired for those areas.
THE SUBSAMPLES should be thoroughly mixed in a clean plastic bucket, keeping the first-foot samples separate from the second-foot samples. About one pound of soil from each depth's composite sample should then be placed in a separate plastic-lined sampling bag. All requested information including grower's name, field identification, date, and previous crop should be provided with the sample. Soil samples should not be stored under warm conditions because microbial activity can change the extractable nitrate (NO3-N) and (NH4-N) concentrations. Accordingly, soil samples should be submitted to a local soil testing lab as quickly as possible to provide for accurate soil testing results. IF SIZABLE AREAS OF THE FIELD DIFFER in productivity or visual appearance, crop yield and quality the field may benefit from variable-rate fertilization. Current site-specific soil sampling and fertilizer application technologies provide useful options for providing optimal nutrient availability throughout the field. Information on soil nutrient mapping and variable-rate fertilization

can be obtained by contacting an extension soil fertility specialist, your local county ag extension educator, crop advisor, or ag consultant. For more detailed information about soil sampling, refer to EXT 704, (Soil Sampling).

FERTILIZER GUIDE

Lack of adequate fertilizer, improper irrigation management, poor stands, non-adapted plant species and poor grazing management are the major causes of low forage production in irrigated pastures. When properly managed, pastures will respond to fertilization and produce large quantities of high-quality forage and livestock products. Irrigated pastures are typically composed either of grass-legume mixtures or grasses alone. The composition of the pasture can be changed by fertilizer management and grazing method. Adapted and high-quality grasses for irrigated pastures include brome grass and orchard grass for well-drained soil, fescue and wheatgrass for saline soils and creeping meadow foxtail and reed canary grass for wet soil. These grasses make excellent summer regrowth. Highest producing grass-legume mixtures usually include one or more of the above grasses with a well-adapted legume variety. An adapted legume variety should have good winter hardiness and resistance to insects and diseases.

NITROGEN (N)

Nitrogen rates depend upon some of the following factors: previous crop, past fertilizer use, soil type and leaching hazard and realistic yield goal for the grower and the area. Grass pastures have responded well to nitrogen (N) fertilizer applications up to 150 pounds N per acre. The N rate depends upon the length of frost-free growing season and the number of cuttings or grazing periods. Production potential increases as the frost-free growing period is extended. Split applications of N fertilizer maintain a more uniform level of forage production through summer and fall. Broadcast 30 to 50 pounds N per acre per application after each cutting or grazing cycle, and irrigate to move N into the plant root zone. As the amount of legume increases in a grass/legume mixture, the need for N fertilizer decreases. When the legume composes over 60 percent of the mixture, responses from N are limited. Nitrogen applications will reduce the quantity of legume in a mixed species stand. Inoculation of legumes when the stand is established will reduce the need for N fertilization when legumes dominate the stand composition.

PHOSPHORUS (P)

Intensively managed, high-producing pasture may respond to phosphorus (P) fertilization. Grasses generally have a low P requirement, and legumes generally have a high P requirement. Thus, P fertilizer applications tend to encourage legumes. Phosphorus movement in soils is limited, so P fertilizer needs to be placed in the rooting zone. Apply phosphorus during seedbed preparation whenever possible. Top-dress established pastures with P fertilizer, preferably in the fall.

POTASSIUM (K)

Grasses have moderate potassium (K) requirements, and legumes have high K requirements. Idaho soils are usually high in natural K. Irrigation water contains K except in mountain streams. Potassium movement in soils is limited, though not to the same extent as

that of phosphorus. Incorporate K during seedbed preparation or broadcast in the fall on established stands.

SULFUR (S)
Sulfur demand is greater for legumes than grasses. Sulfur requirements for grass and legumes will vary with soil texture, leaching losses, S soil test and S content of irrigation water. Apply 30 pounds of S to soil testing less than 10 ppm sulfate-sulfur (S04-S) in the plow layer. Areas irrigated with water from the Snake River and other streams fed by return flow should have adequate S. High rainfall areas, mountain valleys and foothill areas are likely areas for S deficiencies. Sulfur sources should be carefully selected due to variation in its availability to plants. Elemental sulfur must be converted so sulfate (S04) form by soil micro-organisms before it can be taken up by plants. Conversion of elemental S to S04 may take several months in warm moist soils. Elemental S fertilizers cannot supply adequate levels of S the year of application. However, these elemental S sources can supply considerable S the year after the initial application. Sulfate-sulfur sources are recommended to alleviate deficiencies the year of application.

MICRONUTRIENTS
Deficiencies of micronutrients such as zinc (Zn), copper (Cu), manganese (Mn) and iron (Fe) have not been observed on irrigated pastures in southern Idaho. Grasses and legumes are not sensitive to low levels of micronutrients as are row crops such as beans and corn. Boron (B) deficiencies may be observed on legumes in gravelly textured soils. If the soil tests less than 0.25 ppm B, apply 1 to 3 pounds of B per acre. Do not use higher rates because B is toxic to plants in excessive amounts.

GENERAL COMMENTS
1. Nitrogen and phosphorus are the elements needed most on Idaho irrigated pastures. Potassium, sulfur, zinc and boron may be needed. Their need is best determined by soil and plant tissue tests.

2. Legume population in a grass-legume mixture is reduced by nitrogen fertilization and increased by phosphorus and potassium addition when these nutrients are low in the soil.

3. Forage from properly fertilized grass or mixed grass-legume pastures has higher protein, providing higher quality livestock feed than unfertilized pastures.

4. Irrigated pastures make good use of sloping land, stony soils and shallow soils which are less desirable for row crops. Pastures reduce soil erosion during irrigation on sloping land.

5. Fertilizers are only one part of pasture management. Pastures are most profitable when plant selection, irrigation and harvest techniques are not limiting production.

6. Rotational grazing will provide more forage and greater returns than continuous grazing.

Contact your County Extension Agent if you have any questions regarding the interpretation

of this information or for further information on your local needs.

The above fertilizer guidelines are based on relationships established between University of Idaho soil test and crop yield response research. In this research, crop response to fertilizers was evaluated at several sites where the response to fertilizer differed. The recommendations reflect the general or overall response to fertilizers at specific soil test values and the response in individual fields can differ appreciably from the general table recommendation. Some sites will require less than the general recommendation, other sites more. Unfortunately, the science has not developed to the point where the table recommendations can account for all the unknown variables influencing the effectiveness of applied fertilizers at individual sites. The table fertilizer recommendations can only be used as general guides rather than specific recommendations for each and every field.

Furthermore, soil variability can sharply reduce the accuracy composite soil test values for individual fields. That is why large contiguous areas within fields should be sampled separately when they are known to differ in crop growth or soil characteristics known to influence the response to fertilizer. But soil variability frequently does not occur conveniently in large areas that can be sampled separately or fertilized differently. The fertilizer recommendations in most cases do not account for this variability. Soil test based recommendations may be excessive in some field areas and inadequate in other areas of the same field. The recommendations then will be appropriate only to the degree that the composite soil test values for fields actually represent the field. Thus, for fields that are highly variable, the fertilizer recommendations should be considered conservative estimates of fertilizers needed. All the more reason to consider the table fertilizer recommendations as general guides rather than specific recommendations for each and every field.

The fertilizer rates suggested in the tables will support above average yields if other factors are not limiting production. Therefore the recommendations assume that good crop management practices will be used, i.e. insect, disease, and weed control. Nutrient requirements can be met using either commercial fertilizers or equivalent organic matter sources, such as manure or compost, provided their nutrient content and relative availability are known or can be estimated from published literature. Soil test based recommended rates will not be appropriate if the soil samples are improperly taken or do not represent the area to be fertilized. For nitrogen in particular, recommendations will be most accurate when crop history is taken into account and projected yields are reasonable estimates based on long term records.

General Comments:

- Over irrigation and nutrient loss is a hazard. Optimum irrigation management is necessary to meet crop water use needs and avoid loss of nutrients through leaching beyond the root zone and runoff with irrigation tail water.

- Nitrogen leaching is particularly a concern on sandy soils.Optimum management may require split Nitrogen applications to meet crop needs.

- Weed, insect, and disease control significantly influence the efficiency and effectiveness of your fertilizer applications and ultimately crop yield and farm profitability.

- Phosphorus, potassium, and zinc nutrients can be effectively fall-applied as they are not readily leached over winter.

- Phosphorus can be budgeted for a crop rotation.

- If you have questions regarding the interpretation of this information, please contact your Extension Agricultural agent, Crop consultant, or your commodity company fieldman.

- Both farm profitability and water quality can be improved with efficient nutrient use. The following are recommendations in nutrient management, which will optimize nutrient use for crop production while protecting water quality:

    1) Avoid the application of nutrient sources in close proximity to streams, wetlands, drainage ditches, areas of very shallow soils, and sinkholes.

    2) Accurately calibrate nutrient application equipment to insure that recommended rates are applied.

    3) Nitrogen recommendations for many crops are based on yield goals for the crops. It is important to establish realistic yield goals for each field based upon historical yield data, county averages, and your management practices to avoid unnecessary fertilizer costs and minimize potential water quality impairments.

APPENDIX E. MORTALITY MANAGEMENT

Mortalities, if improperly handled, are a source of odor, rodents and other critters, potential pathogens, and nutrients. Most states have a general rule that "dead animals should not be left exposed to the environment." There are five USDA approved methods for managing mortalities: Incineration, composting, rendering, on-site burial and Value-added processing. Additionally the Idaho State Department of Agriculture has rules that govern the collection and disposal of animal mortalities. Contact the Idaho State Department of Agriculture at 208-332-8540 before finalizing your mortality plans.

Mortalities at Horizon Organic Dairy will be picked up by Darling International every day, as needed.

Appendix F. Emergency Action Plan

Farm Name: _____ Date:_____

EMERGENCY CONTACTS AND LOCATION OF EQUIPMENT

Farm Information

Owner/Operator: _____
Farm Address: _____
Directions to Farm (from a major highway or road):_____
_____
_____
_____

Emergency Contacts

- Emergency Farm Contact
Name: _____ Phone: _____

- Fire/Rescue: CALL 911

- County Sheriff: _____

- County Emergency Management: _____

- Contacts for Emergency Manure Hauling or Clean Up Equipment Needs:
_____
_____
_____
_____

Check If Safety Equipment Available

☐ Fire Extinguisher(s)
Location: ☐ Home ☐ Farm Office ☐ Barn ☐ Other (specify)_____
☐ First Aid Kit(s)
Location: ☐ Home ☐ Farm Office ☐ Barn ☐ Other (specify)_____
☐ Hazardous Materials Spill Kit
Location: ☐ Storage Shed ☐ Farm Office ☐ Barn ☐ Other (specify)_____

Information for First Responders

Location(s) of Hazardous or Flammable Materials: __ _____
Location(s) of Shut-Off Switches for Pumps/Power: _____
_____

Has an area been designated for emergency manure storage? ☐ Yes ☐ No
If yes, location: _____

EMERGENCY PROCEDURES

- Personal Injury or Fire

1. Determine the nature of emergency and the type of assistance required. CALL 911.
2. Stabilize any injured persons without moving them, unless it is absolutely necessary to move them out of harm's way.
3. Implement CPR if necessary.
4. In the event of fire, evacuate people and livestock to a safe location.
5. If the fire is small and contained, use a fire extinguisher to put the fire out.
6. Notify emergency personnel of the location of flammables or hazardous materials when they arrive.

- Manure Storage Overflow, Leak or Spill

1. Stop all flow to the storage facility and call emergency farm contact.
2. Determine the extent of incident and what help is needed.
3. Contain the spill/leak/overflow by constructing a temporary dike from soil, corn silage, or other suitable materials, or redirect flow to designated containment/overflow area.
4. If possible, place agitation pump in designated pumping location and load tankers. Land apply manure on fields approved for manure application at rates established by the nutrient management plan.
5. Collect remaining spill and contaminated soil from overflow/leak/spill site and land apply materials on approved files and approved rates.
6. Complete all necessary clean up and temporary repairs. Contact appropriate authorities, if required, and document the incident and what was done.
7. Conduct engineering analysis of manure storage facility if needed and develop repair plan.

- Manure Spill During Transport or Land Application

1. Stop manure pumps and irrigation equipment and close valves.
2 . If there's a road spill, move equipment out of traffic.
3. Call emergency farm contact and determine the extent of incident and what help is needed.
4. Contact the County Sheriff if traffic control is needed.
5. Stop leaks if needed, and contain spill by constructing a temporary berm with soil, straw bales or other available, appropriate materials.
6. If manure is spilled on the roadway, clean the spill immediately from the road and

roadside.
7. Transfer remaining manure to another tanker/hauler if necessary.
8. Collect spilled manure and contaminated soil and land apply materials on approved fields at approved rates.
9. Complete all necessary clean up and make repairs.
10. Contact appropriate authorities, if required, and document the incident and what was done.

- Accidental Entry to Manure Storage Facility

1. CALL 911 and advise rescue personnel of the nature and location of the incident.
2. Locate emergency rescue equipment (ladder, pole, flotation device) and attempt to reach victim.
3. Do not enter a confined area where gases may accumulate.
4. Initiate CPR if necessary. Remain with the victim until help arrives.

- Hazardous Materials Spill

1. Keep a spill cleanup kit available at all locations where hazardous materials are handled, transported, or stored because you will not have time to locate all the necessary items before a significant amount of contamination has occurred.
2. Control the spill situation. Confine the spill by absorbing liquids and covering dry materials.
3. Clean the spill and decontaminate the spill site, equipment and protective clothing.
4. Dispose of spill materials using approved methods.
5. If you cannot manage a spill by yourself, get help. Call 911 for immediate response. If the spill is large or particularly hazardous, also contact the Idaho Bureau of Homeland Security at 1-800-632-8000.

- Catastrophic Event

1. In the case of a catastrophic event, all applicable measures above will be implemented.
2. Primary contact is the local emergency response.
3. All efforts will be coordinated within the framework of the Idaho Emergency Operations Plan (http://www.bhs.idaho.gov/bhslibrary/idahopbasicplan.pdf).

Appendix G. Effects Of Diet And Feeding Management On Nutrient Content Of Manure

Introduction

Accumulation of excess nutrients on the farm results in a whole-farm nutrient imbalance that can contribute to water and air pollution. A major portion of nutrients brought onto livestock and poultry farms comes from purchased feeds. Reducing nutrients or selecting more efficient feed nutrient sources and/or feeding techniques can significantly reduce the nutrient content of excreted manure (helping to achieve a whole farm nutrient balance), and help to reduce odors and other gaseous emissions from manure.

The U.S. Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) released *Unified National Strategy for Animal Feeding Operations* in March 1999. Importantly, the Strategy articulated a national performance expectation that all animal feeding operations should develop and implement technically sound, economically feasible, and site-specific comprehensive nutrient management plans (CNMPs) to minimize potential adverse impacts on water quality and public health. Feed management is one component of a CNMP.

Proper management of animal diets is a valuable tool to help balance nutrient flows, to achieve a whole-farm nutrient balance, and to reduce the potential negative impacts some nutrients have on the environment.

This technical note describes a series of basic nutrition and feeding management principles and potential adjustments that can be made on livestock and poultry operations to reduce nutrient excretions. This technical note was prepared from material published by the Federation of Animal Science Societies (FASS), Savoy, Illinois (fass@assochg.org). Additional technical notes provide specific feeding management and nutrient excretion information for beef, dairy, poultry, and swine. These technical notes are not intended to be all-inclusive. Farmers or operators should consult with Extension personnel or qualified animal nutritionists for detailed information and thorough evaluations of the animal diets and feeding management programs for livestock or poultry operations.

Digestive processes

The digestive process begins with the intake of feed ingredients provided to meet animal maintenance, production, and reproduction requirements. The requirements for production are affected by stage of growth and the type of product (e.g., meat, milk, eggs) involved. How well the animal can retain nutrients for productive purposes depends upon the bioavailability of the nutrients in the diet, absorption, and metabolism. The quantity of nutrients excreted by animals is affected by three main factors:

- the amount of dietary nutrients consumed,
- the efficiency with which they are utilized by the animal for growth and other functions, and
- the amount of normal metabolic losses (endogenous). In other words, the amount of excreted nutrients can be expressed as:

Nutrients excreted=Nutrient intake - Nutrients utilized + Nutrients from endogenous sources

The primary way to reduce the amount of nutrients excreted by animals is to decrease the amount that is consumed and increase the efficiency of utilization of the dietary nutrients for formation of the product.

The goal of efficient and productive feeding of animals, within economic and environmental constraints, is to provide essential available nutrients for maintenance and production with minimal excess amounts.

Nutrients in feeds can vary considerably, and not all nutrients in feeds are available to the animal. Therefore, any means of increasing the digestibility or availability of nutrients will increase the potential for animal use and retention and reduce the amount of nutrients excreted. There is increasing interest today in using enzymes, genetically modified feed ingredients, and feed-processing technologies to enhance the availability of nutrients so as to meet the specific animal needs and reduce excretion of nutrients. In addition, a routine feed analysis program is imperative so that diets can be formulated and periodically adjusted to meet, but not exceed, the nutrient requirements of the animal.

Ruminants and nonruminants have different digestive systems. The ruminant (cattle and sheep) is capable of digesting and utilizing nutrients and energy from forages as well as from the easily digestible grains (concentrates). The nonruminant (poultry and swine) cannot effectively use a large amount of forages (fiber). Also, poultry and swine cannot digest some of the nutrients, particularly phytate phosphorus (P) contained in grains. Usually, 50 percent of the P in the grains and oilseeds is in the form of phytate, which is not available to swine and poultry. Therefore, to meet their P requirements, their diets must include additional P, generally supplied by mineral supplements. The combination of the P in feed grains and the additional mineral P added to the diet increases the total P consumed by the animal. A considerable portion of the nonavailable P and/or extra P not needed by the animal is excreted. If the diet contains an enzyme called phytase, which will release the phytate form of phosphorus from the grains, then supplemental phosphorus in the diets can be reduced.

Following are some factors that should be considered for making adjustments in the diet or feeding program to reduce anticipated excretion of nutrients and manure volume. In all cases, nutrients should be managed to meet the animal needs and, of equal importance, to minimize nutrient excesses.

Feed management factors

Recommended feed management practices for a particular operation may include implementation of grouping strategies, including grouping by gender and increasing the number of production groups; appropriately adjusting diets based on climatic factors; minimizing feed wastage; and employing processing options to improve feed use efficiency. Further information is provided in the species-specific technical notes.

Grouping. (1) Place animals of similar ages, weights, and/or production levels together. (2) Place animals of the same gender together. Split-sex feeding divides the animals by gender so that diets can be formulated to meet the special nutrient needs of each sex.

Climate. Adjust diet to meet specific climate conditions (e.g, temperature, wind, precipitation), or adjust the building climate to optimize nutrient utilization.

Phase feeding. Use multi-phase feeding versus minimal-phase feeding. Phase feeding provides a series of diets that are formulated to more closely meet the nutrient needs of the animal at a particular stage of growth or production. Dividing the growth period into several periods with a smaller spread in body weight allows producers to provide diets that more closely meet the animalâ€™s nutrient requirements.

Wastage. Minimize feed and water spillage.

Processing. Pelleting, extrusion, steaming, micronization, ensiling, and reducing particle size increase the digestibility of diets for swine and poultry. Processing feeds (e.g., grinding, pelleting, and fermenting) releases nutrients in the diet so the animal can absorb and retain more nutrients and excrete less nutrients and manure volume. Processing is not as critical for ruminants; however, coarse grinding, ensiling, and steaming have been effective for ruminants.

Diet manipulation factors

Diet considerations that are described in more detail in the technical notes on individual species include formulation based on feed available nutrients, the use of growth promotants to improve feed use efficiency, consideration of genetic factors that influence nutrient needs, use of specialty feeds, and consideration of nutrient intake from water supplies.

Available nutrients. Know the availability of nutrients in feed ingredients and formulate diets based upon available nutrients in the feed ingredients. Nutritionists should use the respective National Research Council (NRC) nutrient requirements for each farm animal as a guide to formulating diets unless data are available on the farm showing nutrient requirements of a specific genetic line of animals.

Nutrient levels. Some nutrient levels in commercial animal diets may be excessive. Chemical analyses of ingredients and reformulation are critical to minimizing excesses.

Genetics. Know the genetic capability of the animal, including feed intakes and responses to environmental conditions (e.g., climate, disease pressure, housing system).

Growth promoters. Antibiotics and other growth promoters increase feed efficiency. Growth promoters reduce nutrient excretion by increasing nutrient utilization.

Specialty feeds. Providing specific feed ingredients (e.g., high-oil corn, nutrient-dense corn, low-phytate corn, and soybeans) helps achieve a proper balance or increased availability of nutrients. Some of these are not commercially available today, but may be so in the near future.

Water supplies. Water supply sources can contribute significantly to mineral intakes.

Supplemental phosphorus. Reduce supplemental P and add phytase to swine and poultry diets to reduce P excretion. Remove all supplemental P in beef cattle diets and most of the supplemental P in dairy cattle diets to reduce P excretion.

Crude protein. Reduce dietary protein content and add synthetic amino acids to swine and poultry diets; reduce protein and select nitrogen (N) sources that cattle can absorb more effectively.

Benefits of reducing nutrients

Reducing the nutrient content of farm animal manure has the following benefits:

- A smaller land base per animal unit is required for manure application. This may provide a means to balance nutrients on a whole-farm basis.

- Greater volumes of manure can be applied per acre of land to meet agronomic rates for crop production. This may result in less labor and fuel costs for land application and reduce the potential need to supplement crop nutrient budgets with commercial fertilizer. Applying greater amounts of organic matter from manure per acre could result in more carbon sequestration and reduced emissions of gases responsible for global warming.

- Reduced N and sulfur excretion have the potential to reduce odors. Reduced volumes of manure production will reduce the requirement for manure storage capacity and increase the flexibility for timing of manure application to cropland.

Dietary adjustments

The table on page 563 provides potential reductions in the excretion of nutrients with the dietary and/or feeding management adjustments mentioned above for livestock and poultry on operations that have not yet adopted diet and/or feeding management strategies to reduce manure nutrient content. It should be noted, however, that these potential effects are not additive. For more specific

information, see the FASS fact sheets and the NRCS technical notes in this series for the specific animal species.

Potential reductions in the excretion of nutrients

Strategy	Nitrogen reduction (%)	Phosphorus reduction (%)
Formulate diet closer to requirement	10-15 (nonruminants)	10-15 (nonruminants)
	10-25 (ruminants)	10-30 (ruminants)
Reduced protein/AA supplementation (nonruminants)	10-25 (poultry)	n/a[1]
	20-40 (swine)	
Protein manipulation (ruminants)	15-25	n/a[1]
Use of highly digestible feeds	5	5
Use of phytase/low P (nonruminants)	2-5	20-30
Selected enzymes	5	5
Growth promotants	5	5
Phase feeding	5-10	5-10
Split-sex feeding	5-8	n/a[1]

[1] Not applicable.
Table data adapted from Federation of Animal Science Societies (FASS) publication, *Dietary Adjustments to Minimize Nutrient Excretion from Livestock and Poultry,* January 2001.

Glossary terms used in the series of nutrient management technical notes

Available nutrient basis. Formulating a diet based on the bioavailability of the nutrients from the feed ingredients in the diet for the intended production purposes.

Bacterial protein (BCP). The crude protein in rumen bacteria made up of amino acids and nucleic acids.

Barrow. Male castrate of swine.

Bioavailability of nutrients. The amount of nutrient in the diet that is released in the digestion process and that can be absorbed in a form that can be used in the body for normal metabolic functions of the nutrient.

Bovine growth hormone. A natural nonsteroidal protein hormone produced in the pituitary glands of cattle that helps cows produce milk. The growth hormone produced in cattle will only be effective

in cattle. This protein has been produced synthetically in bacteria.

Broiler. Chicken produced for meat.

By-products. Feed ingredients from sources that are normally waste products from other industries.

Concentrates. Plant materials (feeds) that contain relatively high starch content.

Crude protein. A measure of dietary protein that is based on the assumption that the average amino acid in a protein contains 16 percent nitrogen. Thus, total chemically determined nitrogen x 6.25 (100 / 16) = crude protein.

Crystalline amino acid. Amino acid produced in its pure chemical form.

Cystine. A sulfur-containing amino acid that can replace up to one-half of the methionine requirement.

Degradable intake protein (DIP). Crude protein that is degraded in the rumen by micro-organisms.

Denitrification. The process by which nitrogen is converted to nitrogen gas (N_2)and nitrous oxide (N_2O) and returned to the atmosphere.

Diet formulation. The process of combining an assortment of feed ingredients into a diet that will meet the nutrient and energy requirements of the animal for the intended purpose for which the animal is produced.

Digestibility. The relative amount of nutrients released from the digestion process.

Digestion. The process of breaking down nutrients through chewing and the action of enzymes to release nutrients that can be absorbed in animals.

Dry-matter intake. The amount of completely dry feed consumed by animals.

Dry precipitation. Chemicals combining in the atmosphere and falling to Earth.

Endogenous. Nutrients within the animal that may be produced or synthesized. Excretion of endogenous nutrients may occur from the recycling of nutrients and normal cellular metabolic processes.

Endogenous phytase. The enzyme naturally derived within the animal or from microbial sources within the animal that degrades phytate and releases phosphorus.

Feed use efficiency. The amount of live weight gain, milk production, or egg production per unit of feed consumed.

Fermentation by-products. By-products that have been processed by anaerobic fermentation.

Fermented feeds. Feeds that have been processed and preserved by anaerobic fermentation. A typical example is the acid fermentation of whole corn plant silage.

Forage. Plant material that contains relatively high fiber content.

Gilt. A term used to describe young female swine before sexual maturity.

Grass tetany. A nutritional disease caused by inadequate magnesium in the blood. It most commonly occurs among lactating animals grazing on rapidly growing, lush spring pastures containing less than 0.2 percent magnesium and more than 3 percent potassium and 4 percent nitrogen.

Ideal protein basis. Formulating a diet based on the concept that the protein content of the diet has a balance of amino acids that exactly meets the animal's amino acid requirements.

Layer. A chicken raised to produce eggs.

Leaching. The process by which plant nutrients move down through the soil profile, potentially reaching ground water.

Lysine. A basic amino acid required for growth.

Metabolizable protein (MP). Protein (amino acids) absorbed from the small intestine of ruminants. Contains bacterial protein and undegraded intake protein.

Methionine. A sulfur-containing amino acid required for growth.

Microbial protein synthesis. The process by which protein is synthesized in the rumen as micro-organisms grow and multiply.

Near infrared spectroscopy. Feed analysis performed using near infrared light wave reflectance.

Nonruminant (monogastric). An animal that has a simple stomach (one compartment) and must utilize concentrate diets.

Phase feeding. Changing the nutrient concentrations in a series of diets formulated to meet an animal's nutrient requirements more precisely at a particular stage of growth or production.

Phytase. An enzyme that degrades phytate, making phosphorus available to nonruminants.

Phytate phosphorus. A complex, organic form of phosphorus that is bound to the phytate molecule and is not readily digested by nonruminant animals.

Precision nutrition. Providing the animal with the correct ratio and quantity of nutrients in a diet at the ideal ratio to most efficiently produce the end product for which the animal is raised.

Ruminant. An animal capable of digesting forages (roughages) because it has a large stomach with four compartments that have micro-organisms present.

Somatotropin. The hormone that regulates growth, affects the metabolism of all classes of nutrients, stimulates milk production, and improves productive efficiency.

Sparing effect. The process whereby one chemical or metabolite reduces the need or requirements for another nutrient.

Split sex feeding. A feeding and housing program that divides animals by gender and formulates

diets to meet the specific nutrient requirements of each sex more precisely.

Total digestible nutrients (TDN). Total of all the nutrients in the diet that are available to the animal.

Undegraded intake protein (UIP). Feed protein that is not degraded in the rumen by micro-organisms.

Volatilization. The process by which chemicals evaporate at ordinary temperatures.

Wet-chemistry procedures. Analysis of nutrients using standard, approved laboratory procedures.

Wet-dry feeding systems. Feeding systems designed to introduce water with dry feeds, either at prescribed times or at any time on demand by the animal. By introducing water at the time of feeding, the potential for water spillage and dust from feed sources is reduced.

Feed and Animal Management for Dairy Cattle

Introduction

Dairy operations typically include the milking cow herd with some of the cow population in the nonlactation stage (dry cows). Operations may or may not include growing heifers being raised as replacements for the milking herd. Distinctly different diets are required for each of the three production cycle stages, resulting in great differences in the volume and nutrient compositions of manure. This technical note briefly highlights some factors that affect nutrients in manure from dairy cattle and modifications in the diet that can be used to reduce them.

A critical part of feed management is to accurately formulate diets and manage the feeding so that the nutrients fed consistently match the nutrients needed by each group in the herd. For example, table 1 shows how the concentration of nutrients needed in the diet change with stage of the life cycle and level of milk production. This table is an example to illustrate how the diet formula needs to be specific for each group in the herd. The concentration of nutrients needed in the diet for a particular level of production changes with dry matter intake.

Diet formulation

Diets should be formulated and updated regularly to avoid overfeeding of nutrients or fluctuations in milk production. The most common guideline for diet formulation is the National Research Council's (NRC) publication, Nutrient Requirements of Dairy Cattle, 2001. This publication provides equations to compute nutrient requirements for any size cow and milk production level and any stage of the life cycle. Therefore, actual dry matter intakes and a computer program that includes NRC and/or other researchbased equations should be used to formulate diets. Because of the complexity of formulating diets to optimize production while minimizing excretion, producers not trained in nutrition should obtain help from qualified nutritionists when formulating diets. Proper diet formulation requires routine (monthly or quarterly) forage and by-product analysis because these ingredients are highly variable. Tabular values and previous sample analyses are not reliable for determining the nutrient content of these feed ingredients. Conducting a routine moisture analysis is important to adjust and mix feeds to ensure delivery of the formulated diet to the cattle. Cows should be evaluated for their body condition routinely so that the proper energy level of the diet can be determined.

A 50 percent variation in manure production might result from differences in feed wastage, ration formulation, type of feeding program (e.g., dry lot versus pasture feeding), and/or animal grouping systems.

Since dairy cattle are ruminants, they can utilize forages (generally lower in digestibility) as well as concentrates (generally higher in digestibility) in their diets. Depending upon the stage of

production, the roughage-to-concentrate ratio can vary tremendously. As a result, volumes of manure produced are much greater when poorly digestible forages (fiber) are fed as compared to concentrates. In addition, the availability of nutrients in forages can vary considerably with different forage species and stage of maturity. Also, the composition of the manure is significantly different with these different scenarios.

Studies have shown that selecting the right type of protein sources in the diet to meet animal requirements can reduce nitrogen (N) excretion by 15 to 25 percent. Most of the N consumed by cattle is a part of the protein the animal consumes. When cows consume excess protein, an increased amount of N is excreted in the urine as urea. Small amounts of urea can also be diffused into the milk. The concentration of urea in milk is proportional to the amount of N excreted in urine for cows with a given body weight. Cows consuming excess protein typically have higher milk urea nitrogen (MUN) concentration than cows consuming protein at or below their requirements. MUN can be measured for use as an indicator of excess protein in the diet. A general rule is that an average herd MUN should fall between 9 and 14 mg/decaliter of milk. The current recommendation from the NRC (2001) for phosphorus (P) feeding is a range of about 0.32 to 0.42 percent of dietary dry matter content, depending upon level of milk production and stage of lactation. Yet many producers are feeding closer to 0.5 percent for all lactating cows. Farmers often overfeed P with the thought that (1) they will improve reproductive efficiency, and (2) the feed ingredient tables typically underestimate the amount of P in most ingredients.

Mineral P supplements, such as dicalcium phosphate or monocalcium phosphate, are added to dairy cow diets at levels exceeding recommendations to provide a safety margin, especially if reproductive problems are suspected. As a result, diets typically contain 25 to 35 percent more P than is recommended by the NRC. By reducing or removing all supplemental P in the dairy diet, P excretion in manure can be reduced by as much as 30 percent.

Table 1 Selected nutrient requirements of dairy cattle (as determined by sample diets) [1]

Holstein, 1,500 lb cow,	Stage of production								Dry, preg.	660 lb
avg. body condition,									270 days in	heifer @
65 months of age	early lactation		90 days in milk						gestation	1.91 lb
Milk yield, lb/d =	55	77	55	77	99		120		BW=1,656 lb	gain/day
Dry matter intake, lb/d	29.7	34.3	44.7	51.9	59.2	66	30.1	15.6		
Net energy, Mcal/lb	0.94	1.01	0.62	0.67	0.70	0.73	0.48	1.03		
Diet, % RDP	10.5	10.5	9.5	9.7	9.8	9.8	8.7	9.4		
Diet, % RUP	7	9	4.6	5.5	6.2	6.9	2.1	2.9		
Crude protein, %[2]	17.5	19.5	14.1	15.2	16.0	16.7	10.8	12.3		
NDF, min %	25-33	25-33	25-33	25-33	25-33	25-33	33	30-33		
NFC, max %	36-44	36-44	36-44	36-44	36-44	36-44	42	34-38		
Calcium, %	0.74	0.79	0.62	0.61	0.67	0.60	0.45	0.41		

Phosphorus, %	0.38	0.42	0.32	0.35	0.36	0.38	0.23	0.23
Potassium, %[3]	1.19	1.24	1.00	1.04	1.06	1.07	0.52	0.48
Sodium, %	0.34	0.34	0.22	0.23	0.22	0.22	0.10	0.08
Copper, mg/kg [4]	16	16	11	11	11	11	13	10
Zinc, mg/kg	65	73	43	48	55	65	22	27

[1] Adapted from tables 14-7, 14-8, 14-9, and 14-16, Nutrition Requirements of Dairy Cattle, 7th revised edition, 2001, National Research Council (NRC), National Academy of Sciences, National Academy Press, 2101 Constitution Ave., Washington, DC 20418 (J.H. Clark, chair, Subcommittee on Dairy Nutrition).

[2] Equivalent to the sum of rumen degradable protein (RDP) and rumen undegradable protein (RUP) only when they are perfectly balanced.

[3] Heat stress may increase the need for potassium.

[4] High dietary molybdenum, sulfur, and iron can interfere with copper absorption, increasing the requirement.

Overfeeding P for reproductive performance has no scientific basis. Research shows that using accurate requirements for P along with actual feed analysis to formulate diets optimizes animal performance and minimizes P concentration in manure. Forages in particular are highly variable in P content and should be determined for each farm, using wet-chemistry procedures.

By-products (e.g., products of the brewing and distilling industries) are often utilized in cattle diets. Balancing the proper nutrient levels in cattle diets can be challenging when by-products are used. A consideration in the use of by-products is that the concentration and availability of nutrients, especially N and P, from each feed ingredient source can vary greatly, causing significant variation in nutrient contents that can create excesses in the diet.

The dietary salt intake level should be reduced in cattle feeds in semiarid and arid climates where salinity problems can exist and sodium accumulation can adversely affect crop production. In addition, beware of potassium accumulation in forages receiving high levels of manure application. This can potentially cause grass tetany problems in cattle consuming such forages.

Production management

Several new technologies have the potential to reduce manure nutrients per 100 pounds of milk produced. Average responses from some research studies are used in this technical note. Actual responses vary from farm to farm and from group to group within a farm. One such technology is the manipulation of photoperiod by providing artificial lighting. It has been shown that increasing day length can increase milk production in dairy cattle by up to 8 percent. Nutrient intake required by such light-stimulated herds increased by only 4.1 percent, and N and P excretion increased by only 2.8 percent as compared with similar herds under natural day length.

Penning and grouping dairy cattle of similar milk production levels or stage of lactation and formulating diets to meet more nearly the nutritional needs of cattle reduce feed nutrient wastage. Uniform groups (by weight and stage of production) allow the producer to use diets that more closely match the actual needs of all animals in the group since there is less variation among animals,

and overfeeding of nutrients can be minimized.

Dividing the milk production cycle into several periods with less variation in milk production within the group allows producers to provide diets that more closely meet the cattle's nutrient requirements. Use of phase feeding has been estimated to reduce N and P excretion by at least 5 to 10 percent.

Another new technology that may impact nutrient utilization and excretion is the administration of bovine growth hormone (BGH), or somatotropin. This peptide hormone can increase milk production by as much as 30 percent in certain cows within the herd, although the entire herd's production would increase by only 14 percent. The nutrient requirements of a herd treated with BGH may increase by about 7 to 8 percent, and manure P may increase by 5 percent. However, the nutrient losses from the farm per unit of milk produced would, therefore, decrease by 8 to 10 percent per unit of milk produced.

Milking three times instead of twice per day can increase production per cow by an average of 11 percent and reduce stress on a herd. This increase in production results in the consumption of 5 percent more protein, with 3.5 percent more nutrients excreted in manure. The extra milking per day reduces the amount of nutrient excreted in manure by 7 percent per unit of milk.

Feed management

Feed bunk management. Good bunk management is imperative to reduce feed wastage. This involves checking feed intake levels for each group in the herd and adjusting intake to that required for the production level of each group. Consideration should also be given to how much feed is being wasted. In some operations leftovers are scraped up from lactating cows and re-fed to nonlactating cattle. In other cases refused feed is scraped from the feeding area and discarded. In this situation waste removed from the lot includes wasted feed and manure nutrients that need to be applied to the land.

Feed storage. Proper feed storage is necessary to preserve the nutrient value of the feed and to reduce direct loss of nutrients to the environment. Nutrients in water can come from leachate from fermented feeds (such as silage) and from runoff from feeds exposed to rain. Containment of silage leachate and good management of all feed storage areas are advised so that feed-based nutrients are not lost directly to the environment.

Nutritional value of water. The mineral content of the water supply should be considered with regard to the total intake of dietary minerals. Depending on the quality of water supply available, water intake may make a substantial contribution to daily mineral intake, particularly with regard to sulfur and, in some areas of the country, salt. Routine water sampling can help the nutritionist formulate properly for the amount of minerals to add to the diet to meet the animal's actual requirements.

Summary

The NRC publication *Nutrient Requirements for Dairy Cattle,* 2001, is a key reference to evaluate dairy cattle diets on a commercial operation. Also consult qualified nutritionists to accurately evaluate current or planned diet compositions during the development of a conservation plan, particularly during the development of a Comprehensive Nutrient Management Plan (CNMP). Various feed management activities can impact the nutrient content of excreted dairy cattle manure. Table 2 lists the potential of various feed management strategies to decrease the N and/or P content of manure excreted by dairy animals.

The actual impact of a feed management strategy or strategies on a dairy operation can only be determined by analysis of the manure after the strategy has been implemented. During the development of CNMPs, the potential impact of such strategies can be estimated using values in table 2. In using data from this table, planners are encouraged to be conservative in their selection of factors. Also, it is important to remember that the impact of using multiple strategies in a single diet is not likely to be additive for each single strategy used. Rather, it is more likely to be something greater than the value for the strategy with the smallest im- pact, but less than the sum of the values for all the individual strategies used.

During the development of CNMPs, it is better to underestimate the potential impact of feed management than to overestimate it. Later, the plan can be modified based on data accumulated from the actual production operation.

Glossary

By-products. Feed ingredients from sources that are normally waste products of other industries.

Bovine growth hormone. A natural nonsteroidal protein hormone produced in the pituitary glands of cattle that helps cows produce milk. The growth hormone produced in cattle will only be effective in cattle. This protein has been produced synthetically in bacteria.

Concentrate. Plant materials (feeds) that contain relatively high starch content.

Diet formulation. The process of combining an assortment of feed ingredients into a diet that will meet the nutrient and energy requirements of the animal for the intended purpose for which the animal is produced.

Forage. Plant material that contains a relatively high fiber content.

Phase feeding. Changing the nutrient concentrations in a series of diets formulated to meet an animal's nutrient requirements more precisely at a particular stage of growth or production.

Somatotropin. The hormone that regulates growth, affects metabolism of all classes of nutrients, stimulates milk production, and improves efficiency.

Table 2 Potential for feed management to impact the nutrient content of dairy cattle manure [1]

Strategy	Nitrogen reduction %	Phosphorus reduction %
Minimize dietary nutrient excesses	10-15	10-30
Protein manipulation	15-25	n/a[2]
Increase number of production groups	5-10	5-10

[1] Adapted from the Federation of Animal Science Societies (FASS) publication, *Dietary Adjustments to Minimize Nutrient Excretion from Livestock and Poultry,* January 2001.

[2] Not applicable.

Appendix H. Maps

All maps are in the map folder.

Irrigation Management

Proper irrigation management depends on factors such as the following.

Irrigation Efficiency: The efficiency with which the irrigation wets the entire crop root zone. This takes losses that occur from evaporation, runoff and deep percolation.

Crop Evapotranspiration Rate (ET): The combined rate at which water from the soil profile is evaporated into the atmosphere and transpired from the crop. The rate is expressed in units of inches/day.

Management Allowable Depletion (MAD): The percentage of water, which can be depleted from the soil before the crop, experiences water deficiency stress.

Available Water Holding Capacity in the Soil (AWH): The amount of water the pores in the soil profile can hold against gravity. The AWH is expressed as inches of water per inch of soil.

Crop Rooting Depth: The depth in the soil profile to which the crop roots can penetrate.

Pivot Irrigation Summary

Field Name: 100

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Month	Days Between Irrigation	One Pivot Cycle (hrs)	Month	Days Between Irrigation
Mar	.0	.0	Mar	.0	.0	Mar	.0
Apr	7.0	30.0	Apr	7.0	30.0	Apr	7.0
May	6.0	30.0	May	6.0	30.0	May	6.0
Jun	3.0	48.0	Jun	3.0	48.0	Jun	3.0
Jul	4.0	48.0	Jul	4.0	48.0	Jul	4.0
Aug	11.0	24.0	Aug	11.0	24.0	Aug	11.0
Sep	.0	.0	Sep	.0	.0	Sep	.0
Oct	.0	.0	Oct	.0	.0	Oct	.0

Pivot Irrigation Summary

Field Name: 101

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	6.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	4.0	48.0	.7	4.3	.0	.0
Aug	11.0	24.0	.3	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 102

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	289.0 gpm
Length of Pivot:	785 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	4.0	60.0	.9	4.0	.0	.0
Jul	4.0	60.0	.9	6.3	.0	.0
Aug	5.0	60.0	.9	5.2	.0	.0
Sep	4.0	30.0	.4	2.8	.0	.0
Oct	4.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 103

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	404.0 gpm
Length of Pivot:	776 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.6	1.3	.0	.0
May	7.0	30.0	.6	2.9	.0	.0
Jun	7.0	48.0	1.0	4.0	.0	.0
Jul	5.0	48.0	1.0	6.3	.0	.0
Aug	5.0	48.0	1.0	5.2	.0	.0
Sep	6.0	30.0	.6	2.8	.0	.0
Oct	6.0	30.0	.6	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 104

Evaporation/Drift Losses:	.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	259.0 gpm
Length of Pivot:	743 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	5.0	30.0	.4	2.9	.0	.0
Jun	5.0	60.0	.9	4.0	.0	.0
Jul	4.0	60.0	.9	6.3	.0	.0
Aug	5.0	60.0	.9	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	6.0	30.0	.4	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 105

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Barley-Spring
System Flow Rate:	168.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.7	.0	.0
May	21.0	7.0	2.3	3.4	.0	.0
Jun	14.0	7.0	2.8	5.6	.0	.0
Jul	16.0	7.0	2.8	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 106

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Barley-Spring
System Flow Rate:	90.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.7	.0	.0
May	21.0	7.0	2.3	3.4	.0	.0
Jun	14.0	7.0	2.8	5.6	.0	.0
Jul	16.0	7.0	2.8	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 107

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	657.0 gpm
Length of Pivot:	1184 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	8.0	30.0	.4	.7	.0	.0
May	7.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	12.0	24.0	.3	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 108

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	483.0 gpm
Length of Pivot:	1014 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	36.0	.5	.4	.0	.0
May	5.0	36.0	.5	3.6	.0	.0
Jun	4.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	4.0	36.0	.5	3.3	.0	.0
Oct	8.0	36.0	.5	.2	.0	.0

Pivot Irrigation Summary

Field Name: 109

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	404.0 gpm
Length of Pivot:	929 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	48.0	.7	3.6	.0	.0
Jun	4.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	3.0	30.0	.4	3.3	.0	.0
Oct	4.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 110

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	399.0 gpm
Length of Pivot:	922 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	30.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	6.0	48.0	.7	3.4	.0	.0
Jun	4.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	9.0	48.0	.7	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 111

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	121.0 gpm
Length of Pivot:	509 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	7.0	30.0	.4	3.4	.0	.0
Jun	4.0	60.0	.9	5.6	.0	.0
Jul	5.0	60.0	.9	4.3	.0	.0
Aug	11.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 112

Evaporation/Drift Losses:	.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	67.0 gpm
Length of Pivot:	379 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	6.0	30.0	.4	3.4	.0	.0
Jun	4.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	11.0	24.0	.3	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 113

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	372.0 gpm
Length of Pivot:	891 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	4.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	4.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	5.0	30.0	.4	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 114

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	103.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	21.0	7.0	1.7	1.3	.0	.0
May	21.0	7.0	1.7	2.9	.0	.0
Jun	14.0	7.0	2.4	4.0	.0	.0
Jul	14.0	7.0	2.9	6.3	.0	.0
Aug	13.0	7.0	2.9	5.2	.0	.0
Sep	21.0	7.0	2.4	2.8	.0	.0
Oct	28.0	7.0	2.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 130

Evaporation/Drift Losses:	10 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	848.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	7.0	30.0	.4	3.6	.0	.0
Jun	4.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	4.0	30.0	.4	3.3	.0	.0
Oct	6.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 131

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/1/2012
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	5.0	30.0	.4	2.9	.0	.0
Jun	4.0	48.0	.7	4.0	.0	.0
Jul	4.0	48.0	.7	6.3	.0	.0
Aug	4.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 132

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	190.0 gpm
Length of Pivot:	636 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	4.0	60.0	.9	4.0	.0	.0
Jul	4.0	60.0	.9	6.3	.0	.0
Aug	5.0	60.0	.9	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	5.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 133

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	357.0 gpm
Length of Pivot:	873 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	5.0	30.0	.4	2.9	.0	.0
Jun	4.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	4.0	48.0	.7	5.2	.0	.0
Sep	4.0	30.0	.4	2.8	.0	.0
Oct	5.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 134

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	81.0 gpm
Length of Pivot:	416 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	4.0	48.0	.7	5.6	.0	.0
Jul	4.0	48.0	.7	4.3	.0	.0
Aug	9.0	48.0	.7	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 140

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Immature, Irrigated
System Flow Rate:	741.0 gpm
Length of Pivot:	1257 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	5.0	30.0	.4	3.6	.0	.0
Jun	4.0	60.0	.9	5.2	.0	.0
Jul	3.0	60.0	.9	7.6	.0	.0
Aug	4.0	60.0	.9	6.1	.0	.0
Sep	4.0	30.0	.4	3.3	.0	.0
Oct	5.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 141

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	408.0 gpm
Length of Pivot:	933 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	5.0	30.0	.4	.7	.0	.0
May	4.0	30.0	.4	3.4	.0	.0
Jun	5.0	60.0	.9	5.6	.0	.0
Jul	6.0	60.0	.9	4.3	.0	.0
Aug	12.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 142

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	301.0 gpm
Length of Pivot:	802 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	4.0	60.0	.9	5.6	.0	.0
Jul	6.0	60.0	.9	4.3	.0	.0
Aug	12.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 143

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	52.7 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	6.0	2.0	.6	3.4	.0	.0
Jun	4.0	2.0	.8	5.6	.0	.0
Jul	4.0	2.0	.7	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 144

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	647.0 gpm
Length of Pivot:	1175 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	6.0	30.0	.4	3.4	.0	.0
Jun	4.0	60.0	.9	5.6	.0	.0
Jul	6.0	60.0	.9	4.3	.0	.0
Aug	10.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 145

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Immature, Irrigated
System Flow Rate:	367.0 gpm
Length of Pivot:	885 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	4.0	60.0	.9	5.2	.0	.0
Jul	3.0	60.0	.9	7.6	.0	.0
Aug	4.0	60.0	.9	6.1	.0	.0
Sep	5.0	30.0	.4	3.3	.0	.0
Oct	7.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 150p

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	700.0 gpm
Length of Pivot:	1450 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	48.0	.5	.7	.0	.0
May	5.0	48.0	.5	3.4	.0	.0
Jun	3.0	48.0	.5	5.6	.0	.0
Jul	3.0	48.0	.5	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 151

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Barley-Spring
System Flow Rate:	94.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.7	.0	.0
May	6.0	2.0	.6	3.4	.0	.0
Jun	3.0	2.0	.6	5.6	.0	.0
Jul	3.0	2.0	.6	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 152

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	537.0 gpm
Length of Pivot:	1070 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	6.0	30.0	.4	3.4	.0	.0
Jun	4.0	60.0	.9	5.6	.0	.0
Jul	6.0	60.0	.9	4.3	.0	.0
Aug	11.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 153

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	534.0 gpm
Length of Pivot:	1067 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	5.0	30.0	.4	2.9	.0	.0
Jun	4.0	60.0	.9	4.0	.0	.0
Jul	4.0	60.0	.9	6.3	.0	.0
Aug	5.0	60.0	.9	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 154

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	196.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	14.0	7.0	1.2	1.3	.0	.0
May	21.0	7.0	2.0	2.9	.0	.0
Jun	15.0	7.0	1.9	4.0	.0	.0
Jul	11.0	7.0	2.4	6.3	.0	.0
Aug	10.0	7.0	2.0	5.2	.0	.0
Sep	12.0	7.0	1.7	2.8	.0	.0
Oct	14.0	7.0	1.7	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 155

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	196.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	15.0	7.0	1.5	1.3	.0	.0
May	21.0	7.0	2.3	2.9	.0	.0
Jun	18.0	7.0	2.2	4.0	.0	.0
Jul	12.0	7.0	2.8	6.3	.0	.0
Aug	11.0	7.0	2.3	5.2	.0	.0
Sep	14.0	7.0	2.0	2.8	.0	.0
Oct	14.0	7.0	2.0	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 200

Evaporation/Drift Losses:	100 %
Date of Initial Irrigation:	4/15
Current Crop	S-ID, Barley-Spring
System Flow Rate:	815 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	8	48	0.7	.7	.0	.0
May	7	48	0.8	3.4	.0	.0
Jun	4	36	0.5	5.6	.0	.0
Jul	3	36	0.5	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 201

Evaporation/Drift Losses:	10 %
Date of Initial Irrigation:	4/15
Current Crop	S-ID, Barley-Spring
System Flow Rate:	815 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	8	48	0.7	.7	.0	.0
May	7	48	0.7	3.4	.0	.0
Jun	4	36	0.5	5.6	.0	.0
Jul	3	36	0.5	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 202

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	823.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	5.0	60.0	.9	5.2	.0	.0
Jul	4.0	60.0	.9	7.6	.0	.0
Aug	3.0	60.0	.9	6.1	.0	.0
Sep	5.0	30.0	.4	3.3	.0	.0
Oct	7.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 203

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	412.0 gpm
Length of Pivot:	937 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	5.0	60.0	.9	5.2	.0	.0
Jul	3.0	60.0	.9	7.6	.0	.0
Aug	4.0	60.0	.9	6.1	.0	.0
Sep	4.0	30.0	.4	3.3	.0	.0
Oct	6.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 204

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	434.0 gpm
Length of Pivot:	962 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	8.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 205

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	947.0 gpm
Length of Pivot:	1422 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	4.0	48.0	.7	5.6	.0	.0
Jul	4.0	48.0	.7	4.3	.0	.0
Aug	9.0	48.0	.7	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 206

Evaporation/Drift Losses:	10	%
Date of Initial Irrigation:	4/15	
Current Crop	S-ID, Barley-Spring	
System Flow Rate:	815	gpm
Length of Pivot:	1320	ft
Estimated Runoff:	.0	%

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	8	48	0.7	.7	.0	.0
May	7	48	0.7	3.4	.0	.0
Jun	4	36	0.5	5.6	.0	.0
Jul	3	36	0.5	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 207

Evaporation/Drift Losses:	10.0	%
Date of Initial Irrigation:	4/15/2013	
Current Crop	S-ID, Barley-Spring	
System Flow Rate:	434.0	gpm
Length of Pivot:	962	ft
Estimated Runoff:	.0	%

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	8.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 200c

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	264.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	23.0	7.0	1.5	.4	.0	.0
May	23.0	7.0	2.4	3.6	.0	.0
Jun	13.0	7.0	2.9	5.2	.0	.0
Jul	13.0	7.0	2.9	7.6	.0	.0
Aug	14.0	7.0	2.9	6.1	.0	.0
Sep	14.0	7.0	1.5	3.3	.0	.0
Oct	21.0	7.0	1.5	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 201c

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	228.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	23.0	7.0	1.5	.4	.0	.0
May	23.0	7.0	2.3	3.6	.0	.0
Jun	13.0	7.0	2.8	5.2	.0	.0
Jul	13.0	7.0	2.8	7.6	.0	.0
Aug	14.0	7.0	2.8	6.1	.0	.0
Sep	13.0	7.0	1.5	3.3	.0	.0
Oct	21.0	7.0	1.5	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 202c

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	262.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	23.0	7.0	1.5	.4	.0	.0
May	23.0	7.0	2.4	3.6	.0	.0
Jun	13.0	7.0	2.8	5.2	.0	.0
Jul	13.0	7.0	2.8	7.6	.0	.0
Aug	14.0	7.0	2.8	6.1	.0	.0
Sep	12.0	7.0	1.5	3.3	.0	.0
Oct	21.0	7.0	1.5	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 203c

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	115.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	25.0	7.0	1.5	.4	.0	.0
May	25.0	7.0	2.1	3.6	.0	.0
Jun	13.0	7.0	2.8	5.2	.0	.0
Jul	13.0	7.0	2.8	7.6	.0	.0
Aug	12.0	7.0	2.8	6.1	.0	.0
Sep	12.0	7.0	1.5	3.3	.0	.0
Oct	18.0	7.0	1.5	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 204c

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	180.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	23.0	7.0	1.5	.4	.0	.0
May	23.0	7.0	2.1	3.6	.0	.0
Jun	13.0	7.0	2.8	5.2	.0	.0
Jul	13.0	7.0	2.8	7.6	.0	.0
Aug	11.0	7.0	2.8	6.1	.0	.0
Sep	12.0	7.0	1.5	3.3	.0	.0
Oct	21.0	7.0	1.5	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 206wc

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	148.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	25.0	7.0	1.5	.4	.0	.0
May	24.0	7.0	1.5	3.6	.0	.0
Jun	14.0	7.0	2.8	5.2	.0	.0
Jul	10.0	7.0	2.8	7.6	.0	.0
Aug	11.0	7.0	2.4	6.1	.0	.0
Sep	12.0	7.0	1.5	3.3	.0	.0
Oct	18.0	7.0	1.2	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 206ec

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	147.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	25.0	7.0	1.5	.4	.0	.0
May	24.0	7.0	1.5	3.6	.0	.0
Jun	14.0	7.0	2.9	5.2	.0	.0
Jul	10.0	7.0	2.9	7.6	.0	.0
Aug	11.0	7.0	2.5	6.1	.0	.0
Sep	12.0	7.0	1.5	3.3	.0	.0
Oct	18.0	7.0	1.2	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 210hl

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	484.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	23.0	7.0	1.5	.4	.0	.0
May	23.0	7.0	2.3	3.6	.0	.0
Jun	13.0	7.0	2.8	5.2	.0	.0
Jul	13.0	7.0	2.8	7.6	.0	.0
Aug	14.0	7.0	2.8	6.1	.0	.0
Sep	14.0	7.0	2.0	3.3	.0	.0
Oct	21.0	7.0	1.5	.2	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 211

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	726.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	23.0	7.0	1.0	.4	.0	.0
May	20.0	7.0	1.1	3.6	.0	.3
Jun	9.0	7.0	2.3	5.2	.6	.5
Jul	8.0	7.0	2.3	7.6	.0	.0
Aug	9.0	7.0	2.5	6.1	1.0	.1
Sep	12.0	7.0	1.5	3.3	.0	.0
Oct	21.0	7.0	1.5	.2	.1	.0

Pivot Irrigation Summary

Field Name: 300

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	849.0 gpm
Length of Pivot:	1346 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	4.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	4.0	30.0	.4	3.3	.0	.0
Oct	.0	.0	.0	.2	.0	.0

Pivot Irrigation Summary

Field Name: 301

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	3.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	5.0	30.0	.4	3.3	.0	.0
Oct	.0	.0	.0	.2	.0	.0

Pivot Irrigation Summary

Field Name: 302a & 303a

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	71.0 gpm
Length of Pivot:	389 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	3.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	5.0	30.0	.4	3.3	.0	.0
Oct	7.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 304

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	5/1/2013
Current Crop	S-ID, Corn Silage
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	0	0	0	.7	.0	.0
May	10	48	.7	3.4	.0	.0
Jun	10	60	.9	5.6	.0	.0
Jul	3	30	.4	4.3	.0	.0
Aug	2	30	.4	.0	.0	.0
Sep	4	60	.9	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 305

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	10.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 306

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	760.5 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.7	.0	.0
May	6.0	48.0	.6	3.4	.0	.0
Jun	3.0	48.0	.6	5.6	.0	.0
Jul	3.0	48.0	.6	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 307

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Corn-Field, Silage, Irrigated
System Flow Rate:	434.0 gpm
Length of Pivot:	1360 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0	.0
May	6.0	48.0	.4	.8	.0	.0
Jun	4.0	48.0	.4	2.4	.0	.0
Jul	2.0	48.0	.4	6.8	.0	.0
Aug	2.0	48.0	.4	6.0	.0	.0
Sep	4.0	48.0	.4	2.7	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 308

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Corn-Field, Silage, Irrigated
System Flow Rate:	408.0 gpm
Length of Pivot:	933 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0	.0
May	8.0	30.0	.4	.8	.0	.0
Jun	7.0	48.0	.7	2.4	.0	.0
Jul	4.0	48.0	.7	6.8	.0	.0
Aug	3.0	48.0	.7	6.0	.0	.0
Sep	6.0	30.0	.4	2.7	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 309

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Corn-Field, Silage, Irrigated
System Flow Rate:	142.0 gpm
Length of Pivot:	550 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0	.0
May	8.0	30.0	.4	.8	.0	.0
Jun	7.0	48.0	.7	2.4	.0	.0
Jul	4.0	48.0	.7	6.8	.0	.0
Aug	3.0	48.0	.7	6.0	.0	.0
Sep	5.0	30.0	.4	2.7	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 400

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	1069.0 gpm
Length of Pivot:	1510 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	8.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 401

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	421.0 gpm
Length of Pivot:	948 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	4.0	48.0	.7	5.6	.0	.0
Jul	4.0	48.0	.7	4.3	.0	.0
Aug	9.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 402p

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	636.0 gpm
Length of Pivot:	1165 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	4.0	48.0	.7	5.6	.0	.0
Jul	4.0	48.0	.7	4.3	.0	.0
Aug	9.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 402c

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	584.8 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	5.0	2.0	.6	3.4	.0	.0
Jun	4.0	2.0	.8	5.6	.0	.0
Jul	4.0	2.0	.7	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 405

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	233.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	14.0	7.0	1.1	1.3	.0	.0
May	21.0	7.0	1.8	2.9	.0	.0
Jun	16.0	7.0	2.2	4.0	.0	.0
Jul	11.0	7.0	2.2	6.3	.0	.0
Aug	9.0	7.0	1.8	5.2	.0	.0
Sep	10.0	7.0	1.5	2.8	.0	.0
Oct	14.0	7.0	1.5	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 420

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	518.0 gpm
Length of Pivot:	1051 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	.0	.0	.0	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 421

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	628.0 gpm
Length of Pivot:	1157 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	4.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 422p

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 423 &424

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 430

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	1135.0 gpm
Length of Pivot:	1860 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	48.0	.5	.7	.0	.0
May	5.0	48.0	.5	3.4	.0	.0
Jun	3.0	48.0	.5	5.6	.0	.0
Jul	3.0	48.0	.5	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 431

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Alfalfa, Hay, Cut Mid Bloom, Irrigated
System Flow Rate:	802.0 gpm
Length of Pivot:	1308 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.4	.0	.0
May	6.0	30.0	.4	3.6	.0	.0
Jun	3.0	48.0	.7	5.2	.0	.0
Jul	3.0	48.0	.7	7.6	.0	.0
Aug	3.0	48.0	.7	6.1	.0	.0
Sep	5.0	30.0	.4	3.3	.0	.0
Oct	7.0	30.0	.4	.2	.0	.0

Pivot Irrigation Summary

Field Name: 432p

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	440.0 gpm
Length of Pivot:	969 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 433

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	102.0 gpm
Length of Pivot:	467 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 434

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	177.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	14.0	7.0	1.5	1.3	.0	.0
May	21.0	7.0	2.4	2.9	.0	.0
Jun	18.0	7.0	2.2	4.0	.0	.0
Jul	13.0	7.0	2.8	6.3	.0	.0
Aug	11.0	7.0	2.4	5.2	.0	.0
Sep	14.0	7.0	2.0	2.8	.0	.0
Oct	14.0	7.0	2.0	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 435

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	149.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	14.0	7.0	1.5	1.3	.0	.0
May	21.0	7.0	2.3	2.9	.0	.0
Jun	18.0	7.0	2.2	4.0	.0	.0
Jul	13.0	7.0	2.8	6.3	.0	.0
Aug	11.0	7.0	2.3	5.2	.0	.0
Sep	14.0	7.0	2.0	2.8	.0	.0
Oct	.0	.0	.0	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 440

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Corn-Field, Silage, Irrigated
System Flow Rate:	379.0 gpm
Length of Pivot:	899 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0	.0
May	9.0	30.0	.4	.8	.0	.0
Jun	8.0	48.0	.7	2.4	.0	.0
Jul	3.0	48.0	.7	6.8	.0	.0
Aug	4.0	48.0	.7	6.0	.0	.0
Sep	5.0	30.0	.4	2.7	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 441

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	899.0 gpm
Length of Pivot:	1385 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	8.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 442

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	5/1/2012
Current Crop	S-ID, Corn-Field, Silage, Irrigated
System Flow Rate:	165.0 gpm
Length of Pivot:	593 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0	.0
May	9.0	30.0	.4	.8	.0	.0
Jun	8.0	48.0	.7	2.4	.0	.0
Jul	3.0	48.0	.7	6.8	.0	.0
Aug	4.0	48.0	.7	6.0	.0	.0
Sep	5.0	30.0	.4	2.7	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 443

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	817.0 gpm
Length of Pivot:	1320 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	.7	.0	.0
May	5.0	30.0	.4	3.4	.0	.0
Jun	3.0	48.0	.7	5.6	.0	.0
Jul	5.0	48.0	.7	4.3	.0	.0
Aug	8.0	30.0	.4	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 444

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	680.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	5.0	2.0	.6	3.4	.0	.0
Jun	5.0	2.0	.8	5.6	.0	.0
Jul	5.0	2.0	.7	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Pivot Irrigation Summary

Field Name: 450

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	919.0 gpm
Length of Pivot:	1400 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 451

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	670.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	14.0	7.0	1.5	1.3	.0	.0
May	21.0	7.0	2.4	2.9	.0	.0
Jun	18.0	7.0	2.3	4.0	.0	.0
Jul	13.0	7.0	2.9	6.3	.0	.0
Aug	11.0	7.0	2.4	5.2	.0	.0
Sep	14.0	7.0	2.0	2.8	.0	.0
Oct	.0	.0	.0	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 452

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	493.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	24.0	7.0	1.5	1.3	1.2	.0
May	24.0	7.0	1.5	2.9	1.2	.0
Jun	24.0	7.0	2.2	4.0	3.5	.0
Jul	18.0	7.0	2.2	6.3	1.7	.0
Aug	18.0	7.0	2.2	5.2	3.4	.0
Sep	18.0	7.0	1.5	2.8	2.4	.0
Oct	14.0	7.0	1.5	1.1	1.2	.0

Pivot Irrigation Summary

Field Name: 500

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	673.0 gpm
Length of Pivot:	952 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.7	1.3	.0	.0
May	4.0	30.0	.7	2.9	1.5	.0
Jun	2.0	48.0	1.1	4.0	10.7	.0
Jul	2.0	48.0	1.1	6.3	8.7	.0
Aug	3.0	48.0	1.1	5.2	4.7	.0
Sep	5.0	30.0	.7	2.8	.7	.0
Oct	7.0	30.0	.7	1.1	.6	.0

Pivot Irrigation Summary

Field Name: 501

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 502

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 503

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.3
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 504

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.2
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 505

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 506

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Pivot Irrigation Summary

Field Name: 507

Evaporation/Drift Losses:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	880.0 gpm
Length of Pivot:	1370 ft
Estimated Runoff:	.0 %

Month	Days Between Irrigation	One Pivot Cycle (hrs)	Water Applied per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	7.0	30.0	.4	1.3	.0	.0
May	6.0	30.0	.4	2.9	.0	.0
Jun	5.0	48.0	.7	4.0	.0	.0
Jul	3.0	48.0	.7	6.3	.0	.0
Aug	3.0	48.0	.7	5.2	.0	.0
Sep	5.0	30.0	.4	2.8	.0	.0
Oct	7.0	30.0	.4	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 601

Irrigation System Efficiency:	15.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Pasture-Good Condition-Root Depth 4 feet, Irrigated
System Flow Rate:	432.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	24.0	7.0	2.0	1.3	.0	.0
May	24.0	7.0	2.0	2.9	.0	.0
Jun	14.0	7.0	2.2	4.0	.0	.0
Jul	14.0	7.0	2.8	6.3	.0	.0
Aug	14.0	7.0	2.8	5.2	.0	.0
Sep	18.0	7.0	2.8	2.8	.0	.0
Oct	20.0	7.0	2.8	1.1	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 700

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	526.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	5.0	2.0	.6	3.4	.0	.0
Jun	5.0	2.0	.8	5.6	.0	.0
Jul	5.0	2.0	.8	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 701

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	209.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	5.0	2.0	.6	3.4	.0	.0
Jun	5.0	2.0	.8	5.6	.0	.0
Jul	5.0	2.0	.8	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 702

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	162.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	6.0	2.0	.6	3.4	.0	.0
Jun	4.0	2.0	.8	5.6	.0	.0
Jul	5.0	2.0	.8	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0

Hand or Wheel Line Irrigation Summary

Field Name: 703

Irrigation System Efficiency:	10.0 %
Date of Initial Irrigation:	4/15/2013
Current Crop	S-ID, Barley-Spring
System Flow Rate:	175.0 gpm
Estimated Runoff:	0 %

Month	Days Between Irrigation	Days to Irrigate Field Completely	Water Applied Per Irrigation (in)	Net Monthly Irrigation Requirement (in)	Deep Perc.	Irrigation Deficit (in)
Mar	.0	.0	.0	.0	.0	.0
Apr	6.0	2.0	.5	.7	.0	.0
May	5.0	2.0	.6	3.4	.0	.0
Jun	5.0	2.0	.8	5.6	.0	.0
Jul	5.0	2.0	.8	4.3	.0	.0
Aug	.0	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0	.0