

WATER BALANCE FOR RCS #4 TOTAL POND EVAPORATION ONLY

(Rev. B 6/96)
ENVIRO-AD ENGINEERING, INC.

CAFO DATA:	Double A Feeders	RUNOFF CONTROL STRUCTURE DATA:
NAME OF CAFO:	Clayton, NM	Total Storage Avail (ac-ft):
LOCATION:	6 June 1994	25 Yr. 24 hr storage reqd (ac-ft):
DATE:	1979	Total Storage - 25 Yr Storm Cap (ac-ft):
WEATHER DATA FOR YEAR:		Sludge Storage or Min Working Vol (ac-ft):
Year Number 9 of 10.	129%	30 Day CN E/Lot Area:
Percent of avg annual precip:	140 inches	30 Day CN E/ Adjacent Area:
Average annual precipitation for facility----->		
Drainage areas, capacities, & surface areas are combined.		

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.68	0.00	0.00	0.00	0.08	0.14	0.22	2.20	0.18	0.04	0.61	0.00
FEB	0.05	0.00	0.00	0.00	0.01	0.14	0.15	2.47	0.28	(0.14)	0.47	0.00
MAR	1.50	0.09	0.00	0.00	0.18	0.06	0.33	3.90	0.31	0.01	0.49	0.00
APR	2.26	0.29	0.00	0.00	0.26	0.00	0.56	5.52	0.46	0.10	0.59	0.00
MAY	4.74	1.33	0.00	0.02	0.55	0.00	1.91	6.16	0.47	1.44	2.03	0.00
JUN	3.01	0.56	0.00	0.00	0.35	0.00	0.92	8.80	0.81	0.10	2.13	0.00
JUL	1.62	0.12	0.00	0.00	0.19	0.00	0.31	10.60	1.09	(0.78)	1.35	0.00
AUG	2.04	0.23	0.00	0.00	0.24	0.00	0.47	10.50	1.05	(0.58)	0.77	0.00
SEP	0.74	0.00	0.00	0.00	0.09	0.00	0.09	9.10	0.98	(0.90)	0.00	0.00
OCT	0.82	0.00	0.00	0.00	0.10	0.00	0.10	9.60	1.03	(0.93)	0.00	0.00
NOV	0.27	0.00	0.00	0.00	0.03	0.06	0.09	3.22	0.35	(0.26)	0.00	0.00
DEC	0.33	0.00	0.00	0.00	0.04	0.14	0.18	3.34	0.35	(0.18)	0.00	0.00
TOTALS:	18.06	2.63	0.00	0.02	2.11	0.54	5.30	75.41	7.37	(2.07)		

- NOTES:**
- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
 - (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
 - (3) Calculated by SCS Method using a CN of 100.
 - (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
 - (5) Monthly Precip x RCS Surface Area / 12
 - (6) "Other Inflow" is drinking trough overflow in winter months.
 - (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
 - (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
 - (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
 - (10) Column 7 - Column 9
 - (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
 - (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #4 TOTAL POND EVAPORATION ONLY

ENVIRO-AD ENGINEERING, INC.
(Rev. B 6/3/94)

CAFO DATA:	Double A Feeders Clayton, NM 6 June 1994	RUNOFF CONTROL STRUCTURE DATA:	Total Storage Avail (ac-ft): 4.80
NAME OF CAFO:	Clayton, NM	DRAINAGE AREAS (ACRES):	Total Storage Avail (ac-ft): 4.80
LOCATION:	6 June 1994	A. Feedlot Surface: 7.40	25 Yr. 24 hr storage req'd (ac-ft): 2.60
DATE:	1989	B. Area Under Roof: 0.00	Total Storage - 25 Yr Storm Cap (ac-ft): 2.20
WEATHER DATA FOR YEAR:	1989	C. Surface Area of RCS: 1.40	Sludge Storage or Min Working Vol (ac-ft): 0.00
Year Number 10 of 10:	115%	D. Other (adjacent farmland, etc.) 1.00	30 Day CN/ Lot Area: 7.4
Percent of avg annual precip:	115%	Total Area (acres): 9.80	30 Day CN/ Adjacent Area: 4.3

Average annual precipitation for facility-----> 14.0 inches
 Drainage areas, capacities, & surface areas are combined.

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.67	0.00	0.00	0.00	0.08	0.14	0.22	2.66	0.24	(0.02)	0.00	0.00
FEB	0.36	0.00	0.00	0.00	0.04	0.14	0.18	3.54	0.37	(0.19)	0.00	0.00
MAR	0.60	0.00	0.00	0.00	0.07	0.06	0.13	6.48	0.69	(0.56)	0.00	0.00
APR	3.15	0.62	0.00	0.00	0.37	0.00	0.99	7.65	0.67	0.32	0.32	0.00
MAY	3.95	0.96	0.00	0.00	0.46	0.00	1.43	6.19	0.48	0.95	1.27	0.00
JUN	0.41	0.00	0.00	0.00	0.05	0.00	0.05	10.40	1.17	(1.12)	0.14	0.00
JUL	2.49	0.37	0.00	0.00	0.29	0.00	0.66	15.90	1.66	(1.00)	0.00	0.00
AUG	2.54	0.39	0.00	0.00	0.30	0.00	0.69	13.30	1.35	(0.67)	0.00	0.00
SEP	0.22	0.00	0.00	0.00	0.03	0.00	0.03	9.60	1.10	(1.07)	0.00	0.00
OCT	0.62	0.00	0.00	0.00	0.07	0.00	0.07	6.90	0.74	(0.67)	0.00	0.00
NOV	0.77	0.00	0.00	0.00	0.09	0.06	0.15	3.66	0.34	(0.19)	0.00	0.00
DEC	0.28	0.00	0.00	0.00	0.03	0.14	0.17	2.84	0.30	(0.13)	0.00	0.00
TOTALS:	16.06	2.34	0.00	0.01	1.87	0.54	4.77	89.12	9.12	(4.36)		

(start value) -> 0.00

- NOTES:**
- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
 - (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
 - (3) Calculated by SCS Method using a CN of 100.
 - (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
 - (5) Monthly Precip x RCS Surface Area / 12
 - (6) "Other Inflow" is drinking trough overflow in winter months.
 - (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
 - (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
 - (9) Net Pond Evap (ac-ft) = (Col 8 - (Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area)))) x (Surface Area of RCS / 12)
 - (10) Column 7 - Column 9
 - (11) Previous Month Accumulated Storage (Col. 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
 - (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

(Rev. A 6/30/93)
ENVIRO-AG ENGINEERING, INC.

CAFO DATA:		DRAINAGE AREAS (ACRES):	
NAME OF CAFO:	Double A Feeders	A. Feedlot Surface:	Total Storage Avail (ac-ft):
LOCATION:	Clayton, NM	B. Area Under Roof:	25 yr. 24 hr storage reqd (ac-ft):
DATE:	3 June 1994	C. Surface area of RCS:	Total Storage - 25 Yr Storm Cap (ac-ft):
WEATHER DATA FOR YEAR:	1972	D. Other (adjacent farmhand, etc.)	Sludge Storage or Min Working Vol (ac-ft):
Year Number: 2 of 10.			30 Day CN f/ Lot Area:
Percent of avg annual precip:	178%	Total Area (acres):	30 Day CN f/ Adjacent Area:

Average annual precipitation for facility-----> 14.0 inches
 Drainage areas, capacities, & surface areas are combined.

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.00	0.00	0.00	0.00	0.00	0.14	0.14	1.37	0.67	(0.53)	3.10	0.00
FEB	0.03	0.00	0.00	0.00	0.01	0.14	0.15	2.66	1.29	(1.14)	1.96	0.00
MAR	0.00	0.00	0.00	0.00	0.00	0.06	0.06	4.40	2.16	(2.10)	0.00	0.00
APR	0.48	0.00	0.00	0.00	0.24	0.00	0.24	6.69	3.07	(2.84)	0.00	0.00
MAY	4.82	6.42	0.00	0.15	2.37	0.00	8.95	6.87	2.31	6.64	6.64	0.00
JUN	2.95	2.54	0.00	0.00	1.45	0.00	3.99	8.12	3.09	0.89	7.53	0.00
JUL	7.52	13.01	0.00	0.65	3.70	0.00	17.36	8.65	3.13	14.23	21.76	0.00
AUG	2.62	1.96	0.00	0.00	1.29	0.00	3.25	9.00	3.58	(0.33)	21.43	0.00
SEP	3.30	3.19	0.00	0.02	1.62	0.00	4.83	6.47	2.24	2.59	23.60	0.42
OCT	1.28	0.24	0.00	0.00	0.63	0.00	0.86	5.23	2.03	(1.17)	22.43	0.00
NOV	1.80	0.76	0.00	0.00	0.89	0.06	1.70	1.79	0.20	1.50	23.60	0.33
DEC	0.18	0.00	0.00	0.00	0.09	0.14	0.23	1.84	0.82	(0.60)	23.00	0.00
TOTALS:	24.98	28.11	0.00	0.82	12.28	0.54	41.75	63.09	24.61	17.15		

- NOTES:
- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
 - (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
 - (3) Calculated by SCS Method using a CN of 100.
 - (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
 - (5) Monthly Precip x RCS Surface Area / 12
 - (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
 - (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
 - (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
 - (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
 - (10) Column 7 - Column 9
 - (11) Previous Month Accumulated Storage (Col. 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
 - (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

ENVIRO-AG ENGINEERING, INC.
(Rev. A 6/2009)

CAFO DATA:		DRAINAGE AREAS (ACRES):		RUNOFF CONTROL STRUCTURE DATA:	
NAME OF CAFO:	Double A Feeders	A. Feedlot Surface:	34.70	Total Storage Avail (ac-ft):	23.60
LOCATION:	Clayton, NM	B. Area Under Roof:	0.00	25 Yr. 24 hr storage reqd (ac-ft):	12.20
DATE:	3 June 1994	C. Surface area of RCS:	5.90	Total Storage - 25 Yr Storm Cap (ac-ft):	11.40
WEATHER DATA FOR YEAR:	1973	D. Other (adjacent farmland, etc.)	6.00	Sludge Storage or Min Working Vol (ac-ft):	0.00
Year Number 3 of 10:				30 Day CN / Lot Area:	74
Percent of avg annual precip:	91%			30 Day CN / Adjacent Area:	43

14.0 inches

Average annual precipitation for facility----->
Drainage areas, capacities, & surface areas are combined.

Avg End of Month Storage for this year:

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.32	0.00	0.00	0.00	0.16	0.14	0.30	2.41	1.04	(0.74)	22.26	0.00
FEB	0.35	0.00	0.00	0.00	0.17	0.14	0.31	1.45	0.56	(0.24)	22.02	0.00
MAR	2.97	2.57	0.00	0.00	1.46	0.06	4.10	3.28	0.71	3.38	23.60	1.80
APR	2.22	1.32	0.00	0.00	1.09	0.00	2.41	3.21	0.80	1.61	23.60	1.61
MAY	0.36	0.00	0.00	0.00	0.18	0.00	0.18	6.13	2.85	(2.67)	20.93	0.00
JUN	0.18	0.00	0.00	0.00	0.09	0.00	0.09	8.41	4.05	(3.97)	16.96	0.00
JUL	2.59	1.91	0.00	0.00	1.27	0.00	3.18	9.30	3.73	(0.57)	16.41	0.00
AUG	1.60	0.53	0.00	0.00	0.79	0.00	1.31	9.90	4.24	(2.92)	13.49	0.00
SEP	1.34	0.28	0.00	0.00	0.66	0.00	0.94	6.41	2.60	(1.65)	11.84	0.00
OCT	0.40	0.00	0.00	0.00	0.20	0.00	0.20	6.72	3.12	(2.93)	8.91	0.00
NOV	0.03	0.00	0.00	0.00	0.01	0.06	0.07	4.24	2.07	(2.00)	6.91	0.00
DEC	0.43	0.00	0.00	0.00	0.21	0.14	0.35	4.70	2.12	(1.77)	5.15	0.00
TOTALS:	12.79	6.61	0.00	0.00	6.29	0.54	13.44	66.16	27.89	(14.44)		

(start value)-> 23.00

NOTES:

- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
- (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
- (3) Calculated by SCS Method using a CN of 100.
- (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
- (5) Monthly Precip x RCS Surface Area / 12
- (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
- (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
- (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
- (9) Net Pond Evap (ac-ft) = (Col 8 - (Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
- (10) Column 7 - Column 9
- (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
- (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

ENVIRO-AD ENGINEERING, INC.
(Rev. A. 6/20/93)

CAFO DATA:	Double A Feeders	RUNOFF CONTROL STRUCTURE DATA:	Total Storage Avail (ac-ft):	23.60
NAME OF CAFO:	Clayton, NM	DRAINAGE AREAS (ACRES):	Total Storage Avail (ac-ft):	23.60
LOCATION:	3 June 1994	A. Feedlot Surface:	25 Yr. 24 hr storage reqd (ac-ft):	12.20
DATE:	1974	B. Area Under Roof:	Total Storage - 25 Yr Storm Cap (ac-ft):	11.40
WEATHER DATA FOR YEAR:	113%	C. Surface area of RCS:	Sludge Storage or Min Working Vol (ac-ft):	0.00
Year Number 4 of 10.		D. Other (adjacent farmland, etc.)	30 Day CN I/Lot Area:	74
Percent of avg annual precip:	14.0 inches	Total Area (acres):	30 Day CN I/Lot Area:	43

MONTH	Average annual precipitation for facility----->											
	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.41	0.00	0.00	0.00	0.20	0.14	0.34	2.92	1.25	(0.91)	4.24	0.00
FEB	0.02	0.00	0.00	0.00	0.01	0.14	0.15	4.22	2.07	(1.92)	2.32	0.00
MAR	0.73	0.00	0.00	0.00	0.36	0.96	0.42	5.05	2.15	(1.73)	0.59	0.00
APR	1.04	0.09	0.00	0.00	0.51	0.00	0.60	7.78	3.37	(2.77)	0.00	0.00
MAY	0.20	0.00	0.00	0.00	0.10	0.00	0.10	7.63	3.66	(3.56)	0.00	0.00
JUN	1.58	0.51	0.00	0.00	0.78	0.00	1.28	9.80	4.19	(2.91)	0.00	0.00
JUL	1.67	0.60	0.00	0.00	0.82	0.00	1.42	12.90	5.69	(4.27)	0.00	0.00
AUG	5.39	8.22	0.00	0.27	2.75	0.00	11.24	8.28	2.97	8.27	8.27	0.00
SEP	1.29	0.24	0.00	0.00	0.63	0.00	0.88	5.71	2.27	(1.39)	6.88	0.00
OCT	2.74	2.16	0.00	0.00	1.35	0.00	3.51	5.70	1.94	1.57	8.45	0.00
NOV	0.22	0.00	0.00	0.00	0.11	0.06	0.17	3.63	1.69	(1.52)	6.93	0.00
DEC	0.36	0.00	0.00	0.00	0.18	0.14	0.32	1.96	0.80	(0.48)	6.45	0.00
TOTALS:	15.85	11.82	0.00	0.27	7.79	0.54	20.42	75.58	32.05	(11.63)		

- NOTES:**
- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
 - (2) Calculated by SCS Method using CN for lot areas adjusted from one day to thirty day.
 - (3) Calculated by SCS Method using a CN of 100.
 - (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
 - (5) Monthly Precip x RCS Surface Area / 12
 - (6) Other Inflow is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
 - (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
 - (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
 - (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
 - (10) Column 7 - Column 9
 - (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
 - (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

ENVIRO-AG ENGINEERING, INC.
(Rev. A 6/30/93)

CAFO DATA:		Double A Feeders Clayton, NM	
NAME OF CAFO:		3 June 1994	
LOCATION:		1975	
DATE:		1975	
WEATHER DATA FOR YEAR:			
Year Number 5 of 10.		114%	
Percent of avg annual precip:		14.0 inches	
Average annual precipitation for facility----->			
Drainage areas, capacities, & surface areas are combined.			
CAFO DATA:		RUNOFF CONTROL STRUCTURE DATA:	
DRAINAGE AREAS (ACRES):		Total Storage Avail (ac-ft):	
A. Feedlot Surface:		34.70	
B. Area Under Roof:		25 Yr. 24 hr storage req'd (ac-ft):	
C. Surface area of RCS:		0.00	
D. Other (adjacent farmland, etc.)		Total Storage - 25 Yr Storm Cap (ac-ft):	
		5.90	
		Sludge Storage or Min Working Vol (ac-ft):	
		6.00	
		30 Day CNF/Lot Area:	
		46.60	
		30 Day CNF/Adjacent Area:	
		6.45	

MONTH	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Monthly Precip (in)	Runoff from Lot (ac-ft)	Runoff from Roof Area (ac-ft)	Runoff from Adjcn Land (ac-ft)	Pond area Contrib (ac-ft)	Other Inflow (ac-ft)	- Total Inflow (ac-ft)	Gross Evap (in)	Net Pond Evap (ac-ft)	Monthly Net Pond Accum (ac-ft)	Accum Storage at E.O.M. (ac-ft)	Spillage (ac-ft)
JAN	0.95	0.05	0.00	0.00	0.47	0.14	0.65	0.89	0.02	0.64	7.08	0.00
FEB	0.66	0.00	0.00	0.00	0.32	0.14	0.46	1.68	0.53	(0.06)	7.02	0.00
MAR	0.25	0.00	0.00	0.00	0.12	0.06	0.18	5.23	2.46	(2.28)	4.74	0.00
APR	1.22	0.19	0.00	0.00	0.60	0.00	0.79	5.98	2.42	(1.63)	3.11	0.00
MAY	2.02	1.04	0.00	0.00	0.99	0.00	2.03	7.73	3.07	(1.03)	2.08	0.00
JUN	4.90	6.61	0.00	0.16	2.41	0.00	9.18	8.08	2.90	6.28	8.36	0.00
JUL	1.79	0.74	0.00	0.00	0.88	0.00	1.62	8.95	3.72	(2.10)	6.26	0.00
AUG	2.08	1.12	0.00	0.00	1.02	0.00	2.14	9.40	3.87	(1.73)	4.53	0.00
SEP	1.24	0.21	0.00	0.00	0.61	0.00	0.82	4.86	1.87	(1.05)	3.48	0.00
OCT	0.03	0.00	0.00	0.00	0.01	0.00	0.01	8.59	4.21	(4.20)	0.00	0.00
NOV	0.49	0.00	0.00	0.00	0.24	0.06	0.30	4.43	1.96	(1.66)	0.00	0.00
DEC	0.33	0.00	0.00	0.00	0.16	0.14	0.30	3.09	1.37	(1.07)	0.00	0.00
TOTALS:	15.96	9.96	0.00	0.16	7.85	0.54	18.51	68.91	28.39	(9.89)		

NOTES:

- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
- (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
- (3) Calculated by SCS Method using a CN of 100.
- (4) Calculated by SCS Method using CN for adjacent land soilcover complex adjusted from one day to thirty day.
- (5) Monthly Precip x RCS Surface Area / 12
- (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
- (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
- (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5 Lat: 36 00 00, Long: 102 00 00.
- (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
- (10) Column 7 - Column 9
- (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
- (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

ENVIRO-AG ENGINEERING, INC.

(Rev. A 6/20/93)

CAFO DATA:	Double A Feeders	RUNOFF CONTROL STRUCTURE DATA:
NAME OF CAFO:	Clayton, NM	DRAINAGE AREAS (ACRES):
LOCATION:	3 June 1994	A. Feedlot Surface: 34.70
DATE:	1976	B. Area Under Roof: 0.00
WEATHER DATA FOR YEAR:		C. Surface area of RCS: 5.90
Year Number 6 of 10:	96%	D. Other (adjacent farmland, etc.) 6.00
Percent of avg annual precip:	14.0 inches	Total Area (acres): 46.60
Average annual precipitation for facility----->		Total Storage Avail (ac-ft): 23.60
Drainage areas, capacities, & surface areas are combined.		25 Yr. 24 hr storage reqd (ac-ft): 12.20
		Total Storage - 25 Yr Storm Cap (ac-ft): 11.40
		Sludge Storage or Min Working Vol (ac-ft): 0.00
		30 Day CN f/ Lot Area: 7.4
		30 Day CN f/ Adjacent Area: 4.3

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.16	0.00	0.00	0.00	0.08	0.14	0.22	3.44	1.62	(1.40)	0.00	0.00
FEB	0.02	0.00	0.00	0.00	0.01	0.14	0.15	5.48	2.69	(2.54)	0.00	0.00
MAR	0.46	0.00	0.00	0.00	0.23	0.06	0.29	6.48	2.98	(2.69)	0.00	0.00
APR	2.17	1.25	0.00	0.00	1.07	0.00	2.32	5.78	2.08	0.24	0.24	0.00
MAY	2.78	2.23	0.00	0.00	1.37	0.00	3.60	6.71	2.43	1.17	1.41	0.00
JUN	1.31	0.26	0.00	0.00	0.64	0.00	0.90	9.80	4.27	(3.37)	0.00	0.00
JUL	1.57	0.50	0.00	0.00	0.77	0.00	1.27	10.90	4.74	(3.47)	0.00	0.00
AUG	2.87	2.39	0.00	0.00	1.41	0.00	3.80	11.20	4.62	(0.82)	0.00	0.00
SEP	1.77	0.72	0.00	0.00	0.87	0.00	1.59	7.36	2.94	(1.35)	0.00	0.00
OCT	0.20	0.00	0.00	0.00	0.10	0.00	0.10	6.44	3.08	(2.98)	0.00	0.00
NOV	0.14	0.00	0.00	0.00	0.07	0.06	0.13	3.36	1.59	(1.46)	0.00	0.00
DEC	0.00	0.00	0.00	0.00	0.00	0.14	0.14	3.43	1.69	(1.55)	0.00	0.00
TOTALS:	13.45	7.35	0.00	0.00	6.61	0.54	14.50	80.38	34.71	(20.21)		

(start value)-> 0.00

NOTES:

- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
- (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
- (3) Calculated by SCS Method using a CN of 100.
- (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
- (5) Monthly Precip x RCS Surface Area / 12
- (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
- (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
- (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
- (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
- (10) Column 7 - Column 9
- (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
- (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

ENVIRONMENTAL ENGINEERING, INC.
(See A. 6/20/93)

CAFO DATA:		RUNOFF CONTROL STRUCTURE DATA:	
NAME OF CAFO:	Double A Feeders	DRAINAGE AREAS (ACRES):	
LOCATION:	Clayton, NM	A. Feedlot Surface:	34.70
DATE:	3 June 1994	B. Area Under Roof:	0.00
WEATHER DATA FOR YEAR:	1977	C. Surface area of RCS:	5.90
Year Number 7 of 10.		D. Other (adjacent farmland, etc.)	6.00
Percent of avg annual precip:	149%	Total Area (acres):	46.60
Average annual precipitation for facility----->		14.0 inches	
Drainage areas, capacities, & surface areas are combined.		Avg End of Month Storage for this year: 4.8	

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjct Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.61	0.00	0.00	0.00	0.30	0.14	0.44	1.82	0.62	(0.18)	0.00	0.00
FEB	0.08	0.00	0.00	0.00	0.04	0.14	0.18	4.54	2.20	(2.02)	0.00	0.00
MAR	0.13	0.00	0.00	0.00	0.06	0.06	0.12	6.71	3.24	(3.12)	0.00	0.00
APR	3.56	3.71	0.00	0.03	1.75	0.00	5.49	5.18	1.57	3.91	3.91	0.00
MAY	2.13	1.19	0.00	0.00	1.05	0.00	2.24	7.47	2.92	(0.68)	3.23	0.00
JUN	0.80	0.01	0.00	0.00	0.39	0.00	0.40	9.70	4.41	(4.01)	0.00	0.00
JUL	4.66	6.06	0.00	0.13	2.29	0.00	8.48	12.20	4.94	3.55	3.55	0.00
AUG	6.26	9.85	0.00	0.39	3.08	0.00	13.31	9.30	3.46	9.85	13.40	0.00
SEP	2.18	1.26	0.00	0.00	1.07	0.00	2.34	8.65	3.49	(1.15)	12.25	0.00
OCT	0.09	0.00	0.00	0.00	0.04	0.00	0.04	6.78	3.29	(3.25)	9.00	0.00
NOV	0.20	0.00	0.00	0.00	0.10	0.06	0.16	5.40	2.56	(2.41)	6.59	0.00
DEC	0.15	0.00	0.00	0.00	0.07	0.14	0.21	3.59	1.70	(1.48)	5.11	0.00
TOTALS:	20.85	22.08	0.00	0.55	10.25	0.54	33.42	81.34	34.39	(0.98)		

NOTES:

- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
- (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
- (3) Calculated by SCS Method using a CN of 100.
- (4) Calculated by SCS Method using CN for adjacent land soilcover complex adjusted from one day to thirty day.
- (5) Monthly Precip x RCS Surface Area / 12
- (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gallon/day. Thermostatically controlled troughs.
- (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
- (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
- (9) Net Pond Evap (ac-ft) = (Col 8 - (Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area)))) x (Surface Area of RCS / 12)
- (10) Column 7 - Column 9
- (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
- (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8

TOTAL POND EVAPORATION ONLY

ENVIRO-AD ENGINEERING, INC.
(Rev. A 6/30/93)

CAFO DATA:		Double A Feeders Clayton, NM	
NAME OF CAFO:		3 June 1994	
LOCATION:		1978	
DATE:		1978	
WEATHER DATA FOR YEAR:			
Year Number 8 of 10.		144%	
Percent of avg annual precip:		14.0 inches	
Average annual precipitation for facility----->			
Drainage areas, capacities, & surface areas are combined.			
RUNOFF CONTROL STRUCTURE DATA:		Total Storage Avail (ac-ft):	
DRAINAGE AREAS (ACRES):		23.60	
A. Feedlot Surface:		34.70	
B. Area Under Roof:		0.00	
C. Surface area of RCS:		5.90	
D. Other (adjacent farmland, etc.)		6.00	
Total Area (acres):		46.60	
30 Day CNF/Adjacent Area:		30 Day CNF/Adjacent Area:	
		3.5	

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjacent Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.47	0.00	0.00	0.00	0.23	0.14	0.37	1.63	0.59	(0.22)	4.89	0.00
FEB	1.77	0.72	0.00	0.00	0.87	0.14	1.73	2.13	0.37	1.36	6.25	0.00
MAR	0.15	0.00	0.00	0.00	0.07	0.06	0.13	4.46	2.13	(1.99)	4.26	0.00
APR	0.16	0.00	0.00	0.00	0.08	0.00	0.08	8.18	3.95	(3.87)	0.39	0.00
MAY	4.89	6.58	0.00	0.16	2.40	0.00	9.15	7.03	2.39	6.76	7.15	0.00
JUN	2.51	1.78	0.00	0.00	1.23	0.00	3.01	9.60	3.89	(0.88)	6.27	0.00
JUL	0.68	0.00	0.00	0.00	0.33	0.00	0.33	13.70	6.43	(6.10)	0.17	0.00
AUG	5.36	7.68	0.00	0.23	2.64	0.00	10.54	12.50	5.05	5.49	5.66	0.00
SEP	0.50	0.00	0.00	0.00	0.25	0.00	0.25	9.90	4.64	(4.40)	1.27	0.00
OCT	0.65	0.00	0.00	0.00	0.32	0.00	0.32	6.09	2.70	(2.38)	0.00	0.00
NOV	2.70	2.09	0.00	0.00	1.33	0.06	3.48	2.25	0.25	3.24	3.24	0.00
DEC	0.27	0.00	0.00	0.00	0.13	0.14	0.27	3.35	1.53	(1.25)	1.98	0.00
TOTALS:	20.11	18.85	0.00	0.39	9.89	0.54	29.67	80.82	33.91	(4.24)		

NOTES:

- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
- (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
- (3) Calculated by SCS Method using a CN of 100.
- (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
- (5) Monthly Precip x RCS Surface Area / 12
- (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
- (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
- (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5 Lat: 36 00 00, Long: 102 00 00.
- (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
- (10) Column 7 - Column 9
- (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
- (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

(Rev. A 6/20/93)
ENVIRO-AC ENGINEERING, INC.

CARFO DATA:	Double A Feeders	R/N/O/P CONTROL STRUCTURE DATA:	
NAME OF CARFO:	Clayton, NM	Total Storage Avail (ac-ft): 23.60	
LOCATION:	3 June 1994	25 Yr 24 hr storage reqd (ac-ft): 12.20	
DATE:	1979	Total Storage - 25 Yr Storm Cap (ac-ft): 11.40	
WEATHER DATA FOR YEAR:		Sludge Storage or Min Working Vol (ac-ft): 0.00	
Year Number 9 of 10:	129%	30 Day CN f/Lot Area: 74	
Percent of avg annual precip:	140 inches	30 Day CN f/ Adjacent Area: 43	

Average annual precipitation for facility-----> 140 inches
 Drainage areas, capacities, & surface areas are combined.

MONTH	(1) Monthly Precip (in)	(2) Runoff from Lot (ac-ft)	(3) Runoff from Roof Area (ac-ft)	(4) Runoff from Adjct Land (ac-ft)	(5) Pond area Contrib (ac-ft)	(6) Other Inflow (ac-ft)	(7) Total Inflow (ac-ft)	(8) Gross Evap (in)	(9) Net Pond Evap (ac-ft)	(10) Monthly Net Pond Accum (ac-ft)	(11) Accum Storage at E.O.M. (ac-ft)	(12) Spillage (ac-ft)
JAN	0.68	0.00	0.00	0.00	0.33	0.14	0.47	2.20	0.78	(0.30)	1.68	0.00
FEB	0.05	0.00	0.00	0.00	0.02	0.14	0.16	2.47	1.19	(1.03)	0.65	0.00
MAR	1.50	0.43	0.00	0.00	0.74	0.06	1.22	3.90	1.31	(0.09)	0.56	0.00
APR	2.26	1.38	0.00	0.00	1.11	0.00	2.49	5.52	1.93	0.56	1.13	0.00
MAY	4.74	6.24	0.00	0.14	2.33	0.00	8.71	6.16	1.97	6.75	7.88	0.00
JUN	3.01	2.64	0.00	0.00	1.48	0.00	4.13	8.80	3.42	0.71	8.59	0.00
JUL	1.62	0.55	0.00	0.00	0.80	0.00	1.35	10.60	4.57	(3.23)	5.36	0.00
AUG	2.04	1.07	0.00	0.00	1.00	0.00	2.07	10.50	4.42	(2.36)	3.00	0.00
SEP	0.74	0.00	0.00	0.00	0.36	0.00	0.36	9.10	4.14	(3.78)	0.00	0.00
OCT	0.82	0.01	0.00	0.00	0.40	0.00	0.41	9.60	4.35	(3.94)	0.00	0.00
NOV	0.27	0.00	0.00	0.00	0.13	0.06	0.19	3.22	1.46	(1.27)	0.00	0.00
DEC	0.33	0.00	0.00	0.00	0.16	0.14	0.30	3.34	1.49	(1.19)	0.00	0.00
TOTALS:	18.06	12.32	0.00	0.15	8.88	0.54	21.89	75.41	31.04	(9.15)		

- NOTES:**
- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County TX
 - (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
 - (3) Calculated by SCS Method using a CN of 100.
 - (4) Calculated by SCS Method using CN for adjacent land soil/cover complex adjusted from one day to thirty day.
 - (5) Monthly Precip x RCS Surface Area / 12
 - (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
 - (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
 - (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
 - (9) Net Pond Evap (ac-ft) = (Col 8 - Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area))) x (Surface Area of RCS / 12)
 - (10) Column 7 - Column 9
 - (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
 - (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

WATER BALANCE FOR RCS #5, #6, #7 & #8 TOTAL POND EVAPORATION ONLY

(Rev. A. 6/20/99)
ENVIRO-AG ENGINEERING, INC.

CAFO DATA:		DRAINAGE AREAS (ACRES):		RUNOFF CONTROL STRUCTURE DATA:	
NAME OF CAFO:	Double A Feeders	A. Feedlot Surface:	34.70	Total Storage Avail (ac-ft):	23.60
LOCATION:	Clayton, NM	B. Area Under Roof:	0.00	25 yr. 24 hr storage reqd (ac-ft):	12.20
DATE:	3 June 1994	C. Surface area of RCS:	5.90	Total Storage - 25 Yr Storm Cap (ac-ft):	11.40
WEATHER DATA FOR YEAR:	1980	D. Other (adjacent farmland, etc.)	6.00	Sludge Storage or Min Working Vol (ac-ft):	0.00
Year Number: 10 of 10.			46.60	30 Day CN f/ Lot Area:	74
Percent of avg annual precip:	115%	Total Area (acres):	46.60	30 Day CN f/ Adjacent Area:	43

Average annual precipitation for facility-----> 14.0 inches Avg End of Month Storage for this year: 0.8

MONTH	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Monthly Precip (in)	Runoff from Lot (ac-ft)	Runoff from Roof Area (ac-ft)	Runoff from Adjct Land (ac-ft)	Pond area Contrib (ac-ft)	Other Inflow (ac-ft)	Total Inflow (ac-ft)	Gross Evap (in)	Net Pond Evap (ac-ft)	Monthly Net Pond Accum (ac-ft)	Accum Storage at E.O.M. (ac-ft)	Spillage (ac-ft)
JAN	0.67	0.00	0.00	0.00	0.33	0.14	0.47	2.66	1.01	(0.54)	0.00	0.00
FEB	0.36	0.00	0.00	0.00	0.18	0.14	0.32	3.54	1.58	(1.26)	0.00	0.00
MAR	0.60	0.00	0.00	0.00	0.30	0.06	0.36	6.48	2.92	(2.56)	0.00	0.00
APR	3.15	2.91	0.00	0.01	1.55	0.00	4.46	7.65	2.84	1.63	1.63	0.00
MAY	3.95	4.51	0.00	0.06	1.94	0.00	6.51	6.19	2.03	4.48	6.10	0.00
JUN	0.41	0.00	0.00	0.00	0.20	0.00	0.20	10.40	4.93	(4.73)	1.38	0.00
JUL	2.49	1.74	0.00	0.00	1.22	0.00	2.97	15.90	6.99	(4.02)	0.00	0.00
AUG	2.54	1.82	0.00	0.00	1.25	0.00	3.07	13.30	5.70	(2.63)	0.00	0.00
SEP	0.22	0.00	0.00	0.00	0.11	0.00	0.11	9.60	4.62	(4.51)	0.00	0.00
OCT	0.62	0.00	0.00	0.00	0.30	0.00	0.30	6.90	3.11	(2.81)	0.00	0.00
NOV	0.77	0.00	0.00	0.00	0.38	0.06	0.44	3.66	1.45	(1.01)	0.00	0.00
DEC	0.28	0.00	0.00	0.00	0.14	0.14	0.28	2.84	1.27	(0.99)	0.00	0.00
TOTALS:	16.06	10.99	0.00	0.07	7.90	0.54	19.49	89.12	38.45	(18.96)		

NOTES:

- (1) Monthly precip data taken from Texas Water Oriented Data Bank, Location: Dalhart, Dallam County, TX
- (2) Calculated by SCS Method using CN for lot area adjusted from one day to thirty day.
- (3) Calculated by SCS Method using a CN of 100.
- (4) Calculated by SCS Method using CN for adjacent land soil/clover complex adjusted from one day to thirty day.
- (5) Monthly Precip x RCS Surface Area / 12
- (6) "Other Inflow" is drinking trough overflow in winter months. Calculated using 20 tanks @ 75 gal/tank/day. Thermostatically controlled troughs.
- (7) Column 2 + Column 3 + Column 4 + Column 5 + Column 6
- (8) Gross Evaporation (in) taken from Texas Water Oriented Data Bank, Quadrangle A-5, Lat: 36 00 00, Long: 102 00 00.
- (9) Net Pond Evap (ac-ft) = (Col 8 - (Col 1 - (12 x (Col 2/Lot Area) + (Col 3 / Roof Area) + (Col 4 / Other Land Area)))) x (Surface Area of RCS / 12)
- (10) Column 7 - Column 9
- (11) Previous Month Accumulated Storage (Col 11) + Monthly Net Pond Accumulation (Not to be less than sludge storage)
- (12) Spillage occurs if net inflow plus previous month's storage exceeds the total capacity.

REQUIRED STORAGE VOLUME FOR RAINFALL AND RAINFALL RUNOFF

ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: Double A Feeders
LOCATION: Clayton, NM
DATE: 25 May 1994

REMARKS:
****SEE NOTE 3 BELOW****

PARAMETER	QUANTITY				
	RCS #1	RCS #2	RCS #3	RCS #4	RCS #5
1. Area draining into RCS's in acres:					
a. Open lot area draining into RCS (acres).	14.6	7.5	7.6	7.4	7.2
b. Area between open lot surface & RCS (acres).	0.8	0.4	1.0	1.0	0.6
c. Surface area of RCS including solids basin (acres).	2.5	1.4	1.2	1.4	0.5
d. Area of confinement under roof draining into RCS (acres).	0.0	0.0	0.0	0.0	0.0
e. Total Area (acres).	17.9	9.3	9.8	9.8	8.3
2. 25-Year, 24-Hour Rainfall (See Note 1.):					
	4.30 inches		0.358 feet		
3. Runoff Depth Calculations (See Note 2):					
a. For open lot surface, using a CN of 90, the direct runoff depth (inches).	3.20	3.20	3.20	3.20	3.20
b. For area between lots and RCS, use CN of:	69	69	69	69	69
the direct runoff depth (inches):	1.47	1.47	1.47	1.47	1.47
c. For surface area of RCS, using CN of 100 the direct runoff depth (inches):	4.30	4.30	4.30	4.30	4.30
d. For surface area of confinement under roof using CN of 100, the direct runoff (inches):	0.00	0.00	0.00	0.00	0.00
4. Calculated Volume for 25-year, 24-hour Storm:					
a. For open lot surface (ac-ft)	3.90	2.00	2.03	1.98	1.92
b. For area between open lots and RCS (ac-ft)	0.10	0.05	0.12	0.12	0.07
c. For surface area of RCS (ac-ft)	0.90	0.50	0.43	0.50	0.18
d. For area of confinement under roof (ac-ft)	0.00	0.00	0.00	0.00	0.00
5. Total Calculated Runoff Volume (ac-ft):	4.89	2.55	2.58	2.60	2.18

NOTES: 1. Refer to SCS Engineering Technical Note No. 210-18-TX2, March 1983, Plate 5.

2. Using SCS Method: $S = (1000/CN) - 10$
 $Q = ((I - 0.2S)^2)/(I + 0.8S)$

Where: CN = Curve Number from SCS 210-VI-TR-55, 2nd Ed. June 1986, Table 2-2a.

S = Potential maximum retention after runoff begins (in.)

Q = runoff, (in)

I = 25 year, 24 hour rainfall, (in)

3. Drainage areas are calculated based on improvements to the cattle alleys and ditches in pen rows "C" and "D" to direct runoff as planned.

REQUIRED STORAGE VOLUME FOR RAINFALL AND RAINFALL RUNOFF

ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: Double A Feeders
LOCATION: Clayton, NM
DATE: 25 May 1994

REMARKS:
****SEE NOTE 3 BELOW****

PARAMETER	QUANTITY				
	RCS #6	RCS #7	RCS #8	N/A	N/A
1. Area draining into RCS's in acres:					
a. Open lot area draining into RCS (acres).	7.4	7.0	13.1	0.0	0.0
b. Area between open lot surface & RCS (acres).	0.5	0.5	4.4	0.0	0.0
c. Surface area of RCS including solids basin (acres).	0.7	0.6	4.1	0.0	0.0
d. Area of confinement under roof draining into RCS (acres).	0.0	0.0	0.0	0.0	0.0
e. Total Area (acres).	8.6	8.1	21.6	0.0	0.0
2. 25-Year, 24-Hour Rainfall (See Note 1.):	4.30 inches		0.358 feet		
3. Runoff Depth Calculations (See Note 2):					
a. For open lot surface, using a CN of 90, the direct runoff depth (inches).	3.20	3.20	3.20	3.20	3.20
b. For area between lots and RCS, use CN of:	69	69	69	69	69
the direct runoff depth (inches):	1.47	1.47	1.47	0.00	0.00
c. For surface area of RCS, using CN of 100 the direct runoff depth (inches):	4.30	4.30	4.30	4.30	4.30
d. For surface area of confinement under roof using CN of 100, the direct runoff (inches):	0.00	0.00	0.00	0.00	0.00
4. Calculated Volume for 25-year, 24-hour Storm:					
a. For open lot surface (ac-ft)	1.98	1.87	3.50	0.00	0.00
b. For area between open lots and RCS (ac-ft)	0.06	0.06	0.54	0.00	0.00
c. For surface area of RCS (ac-ft)	0.25	0.22	1.47	0.00	0.00
d. For area of confinement under roof (ac-ft)	0.00	0.00	0.00	0.00	0.00
5. Total Calculated Runoff Volume (ac-ft):	2.29	2.15	5.50	0.00	0.00

NOTES: 1. Refer to SCS Engineering Technical Note No. 210-18-TX2, March 1983, Plate 5.

2. Using SCS Method: $S = (1000/CN) - 10$
 $Q = ((I - 0.2S) \wedge 2)/(I + 0.8S)$

Where: CN = Curve Number from SCS 210-VI-TR-55, 2nd Ed. June 1986, Table 2-2a.

S = Potential maximum retention after runoff begins (in.)

Q = runoff, (in)

I = 25 year, 24 hour rainfall, (in)

3. Drainage areas are calculated based on improvements to the cattle alleys and ditches in pen rows "C" and "D" to direct runoff as planned.

REQUIRED STORAGE VOLUME FOR PROCESS GENERATED WASTE AND WASTEWATER

ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: Union County Feedlot, Inc. 2-4
 LOCATION: Clayton NM
 DATE: 25 May 1994

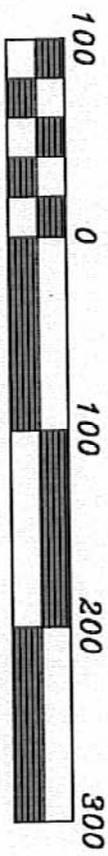
PARAMETER	QUANTITY				
	RCS#1-7	RCS #8	N/A	N/A	N/A
1. Wet Manure Production, gal/day (#7 from "Estimated Manure Production Data" x's 7.48 / 62.4) from housed area.	0	0	0	0	0
2. Fresh Water Used For Manure Removal, Drinking, Cleanup, Etc.					
a. Flushwater system with no recirculation: (12 gal/lb dry manure), gal/day	0	0	0	0	0
b. Flushwater system with recirculation: (12 gal/lb dry manure), gal/day	0	0	0	0	0
c. Manual scrape and flushwater system: (6 gal/lb dry manure), gal/day	0	0	0	0	0
d. Vol. of drinking water per day, gal/day	0	1,500	0	0	0
e. Volume of cleanup water used per day not including manure removal flushwater, gal/day	0	0	0	0	0
3. Total volume of process generated waste and wastewater, gals/day	0	1,500	0	0	0
4. Total volume of process generated waste and wastewater, cu ft/day	0	201	0	0	0
5. Total volume of process generated waste and wastewater, ac-ft/day	0.000	0.005	0.000	0.000	0.000
6. Minimum storage period: 21 days or amount specified by State Water Quality plan.	21	21	21	21	21
7. MIN. REQUIRED STORAGE VOLUME: (Total volume of PROCESS GENERATED WASTE & WASTEWATER times the minimum storage period, ac-ft.	0.00	0.10	0.00	0.00	0.00

NOTES: A. Water inflow to RCS #8 is drinking water overflow during winter months to prevent freeze-ups.
 Calculated using 20 tanks at 75 gal/day/tank.
 B. All other RCS's do not receive water trough overflow.

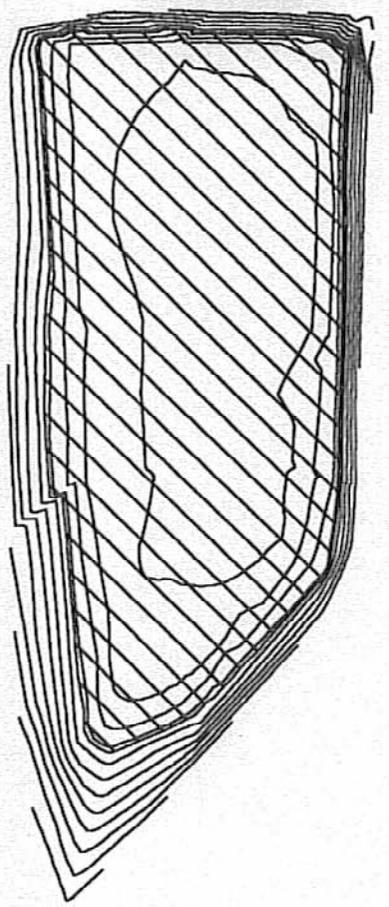
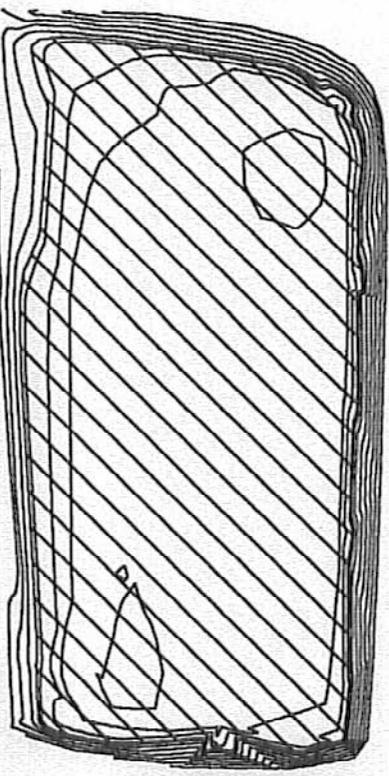
DOUBLE A FEEDERS - RCS #9 DATA
CLAYTON, NEW MEXICO
SURVEYED: 12/27/96
BY: S. BAIN, W. WHITTENBURG

H.W.L. ELEV.
SURFACE AREA @ H.W.L.
VOLUME AT H.W.L.
REQUIRED VOLUME
* With 2 Foot Freeboard

991.35'
2.50 ACRES
9.10 AC-FT
6.72 AC-FT
*



Scale 1" = 100'



RCS #9



**Double A Feeders
Union County, NM**

Capacity Certification for RCS #10

RCS #10 was surveyed by Enviro-Ag Engineering, Inc. to determine its total capacity. The capacity of RCS #10 was calculated to be:

15.96 Acre-Feet

The calculated capacity of RCS #10 exceeds the capacity as required in the TCEQ General Permit. Required capacity calculations for RCS #10 are included in this facility's Pollution Prevention Plan.

Respectfully Submitted,



Brad J. Wieck, P.E.
Brad Wieck, P.E.
Enviro-Ag Engineering, Inc.

8/3/2007

Attachments: Plan/Profile Views of Capacity Survey

Double A Feeders

RCS #1 volume data

Date Surveyed: May 2006

SURVEYED BY: KB DB

Avg. Bottom Elevation

97.52'

H.W.L. Elevation @ 2' Freeboard

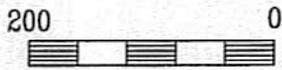
100.40'

Capacity at H.W.L.

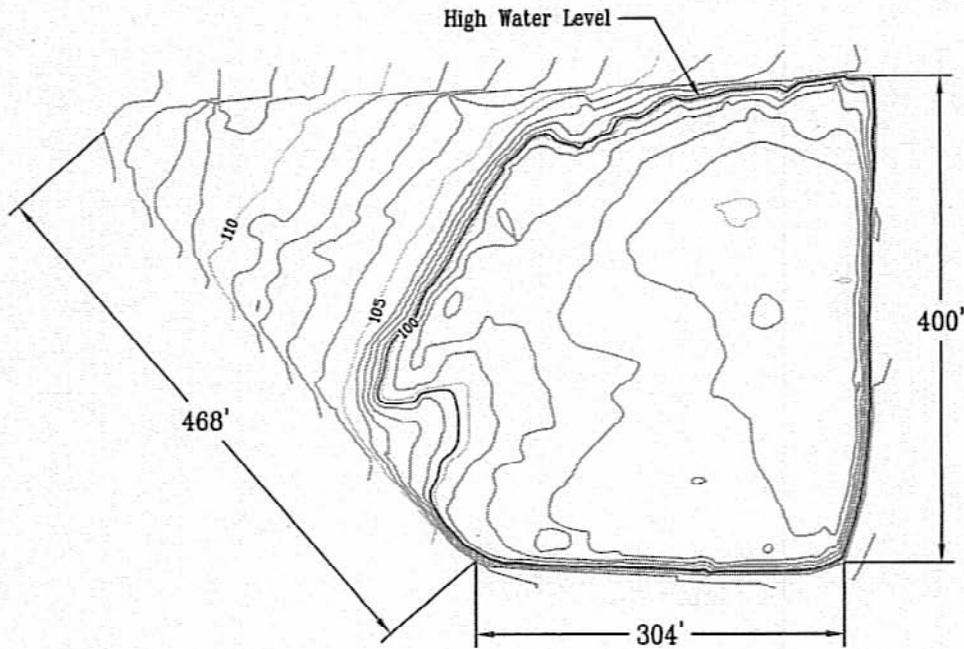
15.96 Ac-Ft

Surface Area @ Design H.W.L.

4.67 Acres



Scale: 1" = 200'



Double A Feeders
Union County, New Mexico

RCS #10 Capacity Drawing
Plan and Profile



Enviro-Ag Engineering, Inc.
ENGINEERING CONSULTANTS
3404 Airway Boulevard
AMARILLO, TEXAS 79118
TEL (806) 353-6123 FAX (806) 353-4132

High Water Level Mark
4.0' on Pond Marker

2' Freeboard Min.

4
3
2
1
0

4.0'

96.40'

Pond Bottom

Cumulative Volume	Gallons By Foot
15.93 Ac-Ft	218,320 Gal.
11.42 Ac-Ft	218,320 Gal.
7.23 Ac-Ft	218,320 Gal.
3.71 Ac-Ft	218,320 Gal.

**REQUIRED STORAGE VOLUMES
for RETENTION CONTROL STRUCTURES**

ENVIRO-AG ENGINEERING, INC.

NAME OF CAFO: Double A Feeders
 LOCATION: Union County, Texas
 DATE: August-07

PARAMETER	RCS #10	
1. Processed Generated Water Storage and Rainfall Runoff Storage		
a. Trough Overflow during winter months (gal/head/day):		0.5
b. Number of Head:		7,000
c. Volume of Process Water (gal/day):		3,500
d. Number of Days of Storage:		60
e. Storage Volume for Process Water (gal)		210,000
	ac-ft	0.64
2. Drainage Areas		
	CN	Area (ac)
a. Pen/Open Lot areas	90	20
b. Adjacent area between pens and RCS	85	5.3
c. Roofed/Paved areas	100	3
d. RCS surface area	100	4.7
e. Total Area (acres)		33
3. 25-Year, 24-Hour Rainfall Event	(inches)	4.3
4. Runoff Volume Determination (a)	(inches)	(ac-ft)
a. Pen Area	3.20	5.34
b. Adjacent Area	2.73	1.20
c. Roof Area	4.30	1.08
d. RCS Surface Area	4.30	1.68
e. Total Runoff (ac-ft):		9.30
5. Summary of Required Storage Volumes		(ac-ft)
a. Processed Water Storage		0.64
b. Required Volume for Rainfall Runoff		9.30
c. Sludge Accumulation Volume (b)		1.34
Total Volume Required for RCSs		11.28

NOTES:

a. Using SCS method:

Where:

$$S = (1000/CN) - 10$$

$$Q = ((P - 0.2S)^2)/(P + 0.8S)$$

S = Potential maximum retention after runoff begins(in)

Q = Runoff (in)

P = 25-year, 24-Hour rainfall (in)

CN = Curve Number from SCS 210-VI-TR-55,
2nd Edition, June 1986

b. Sludge accumulation is estimated at 25% of runoff from the pen area.



Brad J. Wilcox, PE
8/5/2007

WATER BALANCE MODEL IRRIGATION AND EVAPORATION for RCS 10

ENVIRO-AG ENGINEERING, INC.

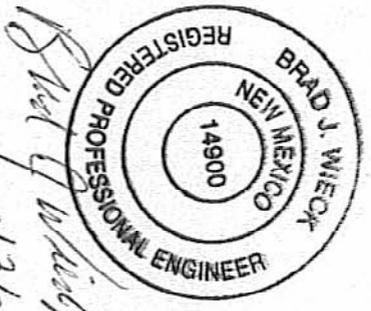
NAME: Double A Feeders
LOCATION: Union County, NM
DATE: August-07

HYDROLOGIC CHARACTERISTICS
 Pen Area (acres): 20
 Adjoint Area (acres): 5.3
 Roof Area (acres): 3
 Total RCS Surface Area (acres): 4.7
 Total Irrigated Area (acres): 4.7
 Cropping scheme: Grass
 Effective Evaporation Surface Area (acres): 4.0

IRRIGATION CELL VOLUME SUMMARY DATA
 25-Year, 24-Hour Rainfall Volume (ac-ft): 9.3
 Process Generated Wastewater Volume (ac-ft): 0.6
 Sludge Accumulation Volume (ac-ft): 1.3
 Total Required Capacity (ac-ft): 11.28

MONTH	RCS INFLOW CALCULATIONS				HYDRAULIC CROP DEMAND CALCULATIONS			RCS STORAGE SUMMARY					
	(1) Average Precipitation (inches)	(2) Runoff Pen Area (inches)	(2) Runoff Adj Area (inches)	(3) Process Inflow (ac-ft)	(4) Total Inflow (ac-ft)	(5) Runoff from Irrig. Area (inches)	(6) Effect. Rainfall on Irrig. Area (inches)	(7) Consumptive Use (inches)	(8) Net Crop Demand (ac-ft)	(9) Monthly Lake Surface Evaporation (inches)	(10) Net Pond Evaporation (ac-ft)	(11) Actual Withdrawal (ac-ft)	(12) Storage at End-of-Month (ac-ft)
JAN	0.41	0.00	0.00	0.33	0.60	0.00	0.41	1.08	3.13	2.03	0.60	0.00	1.34
FEB	0.46	0.00	0.00	0.30	0.60	0.00	0.46	1.35	4.15	2.40	0.60	0.00	1.34
MAR	0.81	0.00	0.00	0.33	0.86	0.00	0.81	3.42	12.18	4.28	0.86	0.00	1.34
APR	1.06	0.03	0.00	0.32	1.06	0.00	1.06	4.50	16.05	6.03	1.06	0.00	1.34
MAY	2.62	0.68	0.34	0.33	3.29	0.09	2.53	7.38	22.63	7.08	2.36	0.94	1.34
JUN	2.48	0.60	0.29	0.32	3.04	0.06	2.42	8.19	26.95	8.65	2.88	0.16	1.34
JUL	3.07	0.95	0.54	0.33	4.13	0.19	2.88	7.83	23.09	10.60	3.53	0.60	1.34
AUG	3.07	0.95	0.54	0.33	4.13	0.19	2.88	7.83	23.09	10.60	3.53	0.80	1.34
SEP	1.94	0.32	0.12	0.32	2.16	0.01	1.93	6.12	19.54	8.00	2.16	0.00	1.34
OCT	1.20	0.06	0.00	0.33	1.21	0.00	1.20	4.23	14.14	6.57	1.21	0.00	1.34
NOV	0.67	0.00	0.00	0.32	0.75	0.00	0.67	2.34	7.79	4.13	0.75	0.00	1.34
DEC	0.44	0.00	0.00	0.33	0.62	0.00	0.44	1.08	2.99	2.49	0.62	0.00	1.34
TOTALS	18.23	3.60	1.83	3.92	22.43	0.54	17.69	52.47	162.30	72.26	19.93	2.49	

- NOTES:
- (1) Average precipitation taken from Dallam County, Texas (Tralene).
 - (2) Runoff from pens, adjacent areas calculated using SCS Curve Number Method adjusted from 1 to 30-day Curve Number. (Ref: USDA-SCS, Texas Engineering Technical Note No. 210-18-TX3, Figure 1 March 1983).
 - (3) Process Inflow is calculated from process generated wastewater. Table 4.2.
 - (4) Total inflow is calculated as that volume of rainfall that falls on the RCS and process water that enters the RCS.
 - (5) Runoff from irrigated areas calculated using SCS Curve Number Method adjusted from 1 to 30 day curve number. (Ref: USDA-SCS, Texas Engineering Technical Note No. 210-18-TX3, Figure 1, March 1983)
 - (6) Effective monthly rainfall on the irrigated area is taken as the difference between Column (6) and Column (1).
 - (7) Consumptive Use values taken from crops on irrigated land. (Ref: Texas Board of Water Engineers Bulletin 6019, Consumptive Use of Water by Major Crops in Texas, November 1960) Includes values for prewetting.)
 - (8) Net Crop Demand = ((Consumptive Use(8) - Effective Rainfall(7))/12) x Irrigated Area.
 - (9) Average monthly lake surface evaporation taken from Dallam County, Texas (Tralene).
 - (10) Net Evaporation from the water surface is taken as Monthly Lake Surface Evap(9) x (RCS Surface Area).
 - (11) Actual Withdrawal from the irrigation cell not to exceed Net Crop Demand. (No consideration given for nutrient demand of crop)
 - (12) Storage volume in the irrigation cell at the end of the month. The storage calculated in this column should not encroach in the volume reserved for the 25-year, 24-hour rainfall event.



01/3/2003