

Natural Resources Conservation Service

Conservation Planning on Your Land

California's Planning Workbook

"Your Land, Your Decisions, Your Plan"

Dairy
AFO / CAFO

United States
Department of
Agriculture



Conservation Planning on Your Land

*This workbook will help you bring together the information you need to complete a conservation plan. The questions are designed to gather information about your land, objectives, and management. **Although the information will be reviewed by a conservation planner, it is confidential and belongs to you. It will NOT be released to other agencies, groups or individuals.***

Dairy, Animal Feeding Operation/Confined Animal Feeding Operation

Please take some time to answer the following questions as best you can. NRCS will assist you with any questions that you do not know. Feel free to use additional sheets, as desired, to answer questions. The more information you supply the easier it will be to help you.

What are the long term goals for your property?

Do you have a Comprehensive Nutrient Management Plan (CNMP) that represents your AFO/CAFO's existing conditions? Yes No

Do you have a Waste Management Plan, Nutrient Management Plan, Farm Plan or any other existing documentation for your AFO/CAFO? Yes No

If yes, are you willing to provide a copy to NRCS? Yes No

Headquarter Questions

Are there any issues on your headquarters that you would like us to be aware of?

What kind of animals do you have? (Please fill out attached "Animal Inventory" worksheet in Attachment A)

If you have milking animals, how do you cool your milk? Air cooled Water cooled

Do you recycle any clean water from your milk barn? Yes No N/A

If Yes, please explain:

Headquarter Questions (cont.)

Is all water from your facilities and corrals contained on your property? Yes No

If No, Please explain:

Is your dairy flushed or scraped? flushed scraped

Is all manure and/or silage stored on an impervious surface (i.e.: concrete, asphalt, etc.)? Yes No

If No, Please explain:

Do all of these storage areas drain to the lagoon? Yes No

If No, Please explain:

After it rains, is there any standing water in your corrals or anywhere else on your property?

Yes No

If Yes, Please explain:

Do you have a manure storage lagoon on your property? Yes No

If Yes, work with a planner to fill out "Pond Inventory" (Attachment B) and "Concrete"(Attachment C) worksheets.

Do you have a mechanism to separate solid manure from liquid manure? Yes No N/A

If yes, please explain how you separate out solids:

If No, are solids in your manure lagoon an issue? Yes No

Please explain:

Headquarter Questions (cont.)

Is the capacity of your manure storage lagoon an issue on your property? Yes No N/A

If yes, please explain:

Can you store liquid manure through the rainy season? Yes No

If No, please explain:

Do all your buildings have gutters that are in functioning condition? Yes No

If no, do the buildings that do not have gutters cause an issue on your property? Yes No

If yes, please explain:

Do any guttered buildings drain to the manure storage lagoon? Yes No

Do you have a dedicated pump for flushing your lanes? Yes No

Do you agitate your liquid manure prior to application? Yes No

Do you export any liquid or solid manure? Yes No

If yes, please tell us how much, how often and to whom?

Do you have maps showing existing location of all manure structures (pipelines, pumps, mix boxes, flowmeter, manure storage lagoons, manure pad' etc.) on headquarters? Yes No

If yes, please share with your conservation planner.

If No, please work with a conservation planner to locate all manure structures on a map.

CROP/PASTURE QUESTIONS (cont.)

Can you apply liquid manure to all of your cropland? Yes No

If No, is there a possibility to add additional infrastructure so that these fields can receive liquid manure?

Yes No

Please explain:

When do you apply liquid and solid manure to your fields? And how do you determine when and how much to apply? (i.e flowmeter, metered truck, soils tests...)

Do you have any head to head flows of irrigation water and manure water for your cropland?

Yes No

If yes, which fields?

Do you have any ponding at the end of your fields? Yes No

If yes, which fields and is it an issue?

Can any of your properties drain offsite? Yes No

If yes, where do they drain to?

Do you have functioning tail-water return systems in place? Yes No

Can you block the drains? Yes No

If drains can be blocked, do you block them when applying lagoon water and/or for at least 60 days after application of solid manure?

Yes No

Do you have soils and/or tissue analysis completed? Yes No

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CROP/PASTURE QUESTIONS (cont.)

If yes, please explain how often and what kind of analyses are completed?

Do you take samples of liquid manure and/or solid manure prior to application and have them tested?

Yes No

If yes, please explain how often and what kind of tests you take?

PASTURED DAIRY QUESTIONS (if applicable)

Are you certified Organic, or in transition to Organic certification? Yes No

How many milking strings do you run? _____

What type of grazing system do you use for your pastures (i.e. continuous, timed rotation, rest rotation, deferred rotation, targeted rotation, managed intense rotation, etc.)?

And briefly describe:

Do you document your grazing periods in each field? Yes No

Please describe method:

Do you have permanent fence infrastructure, electric, temporary electric, or a combination? Yes No

Please describe your fence infrastructure to support your grazing regime:

PASTURED DAIRY QUESTIONS (cont.)

Do you have adequate water troughs to support your grazing regime? Yes No

Do you have adequate water storage to support your livestock demand? Yes No

What is the source for your livestock water? Examples such as springs, ponds, wells, water district, water hauled, or other:

Do you have compaction issues around water troughs, or in specific areas of a field? Yes No

Are there any problems with pasture lanes, or pasture accessibility? Yes No

Do you have pasture concerns, such as health, production, invasive species, percent desirable grass and legumes, etc.? Yes No

Do you reseed your pastures? Yes No

And if so, how often and what do you seed with?

Are you planning any changes or additions to your pasture vegetation? Yes No

Do you irrigate your fields? Yes No

And if so, please describe timing, source and method?

Do you apply waste liquid, slurry or solids to you pastures? Yes No

If so, what is the method, timing, and amount? Please describe, as well as identify type of application per field:

Do you fertigate your fields? Yes No

If so, what type of gun do you use?

PASTURED DAIRY QUESTIONS (cont.)

Do you apply commercial fertilizers? Yes No

If so, when and where is application made?

Do you lime or fertilize according to soil test levels? Yes No

Do you work with a nutritionist or feed consultant? Yes No

What do you supplement feed? Yes No

If yes, please describe:

Attachment B

Work with your planner if you have waste storage on the property.

NOTE: Most of this information can be found in your Waste Management Plan.

Manure Storage Pond Inventory

Pond Design Data

Design Storage Period		days
Estimated water from milk barn		gal./day
Additional or daily freshwater calculated by other means		gal./day
Bedding to pond		cu.ft./day
Tailwater or Dilution Water added per storage period		total gal.
Manured surfaces draining to the pond		acres
Concrete surfaces draining to the pond		sq.ft.
Roof surfaces draining to the pond		sq.ft.

			Pond 1	Pond 2	Pond 3
Hb	Embankment Height	ft.			
Wb	Embankment Top Width	ft.			
Fb	Freeboard	ft.			
Hp	Depth of Pond (freeboard + design depth)	ft.			
RSp	Planned Residual Solids Accumulation	ft.			
Hpi	Minimum Pump Intake Height	ft.			
SSg	Side Slope (Ground Side)	'X' Horiz:1 Vert			
SSp	Side Slope (Pond Side)	'X' Horiz:1 Vert			
L	Pond Length (measured at top inside edge of embankment)	ft.			
W	Pond Width (measured at top inside edge of embankment)	ft.			
C:F	Cut:Fill Ratio	'X' Cut: 1 Fill			

Attachment B (cont.)

			Pond 4	Pond 5	Pond 6
Hb	Embankment Height	ft.			
Wb	Embankment Top Width	ft.			
Fb	Freeboard	ft.			
Hp	Depth of Pond (freeboard + design depth)	ft.			
RSp	Planned Residual Solids Accumulation	ft.			
Hpi	Minimum Pump Intake Height	ft.			
SSg	Side Slope (Ground Side)	'X' Horiz:1 Vert			
SSp	Side Slope (Pond Side)	'X' Horiz:1 Vert			
L	Pond Length (measured at top inside edge of embankment)	ft.			
W	Pond Width (measured at top inside edge of embankment)	ft.			
C:F	Cut:Fill Ratio	'X' Cut: 1 Fill			

Attachment C

Work with planner if you have waste storage on the property.

Concrete, Roof, Manured, and Bare Areas Drained to the Manure Storage Pond

Roof areas that may drain to pond					
Label	Width (ft.)	Length (ft.)	Area (sq.ft.)	Diverted (yes or no)	Diverted Area (sq.ft.)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
<div style="display: flex; justify-content: space-between;"> Total Roof Area = _____ sq.ft. </div> <div style="display: flex; justify-content: space-between;"> Diverted Roof Area = _____ sq.ft. </div> <div style="display: flex; justify-content: space-between;"> Undiverted Roof Area = _____ sq.ft. </div>					

Concrete Areas NOT Under a Roof			
Label	Width (ft.)	Length (ft.)	Area (sq.ft.)
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			
N			
O			
P			
Q			
R			
S			
T			
U			
V			
W			
X			
Y			
Z			
Total Area			_____sq.ft.

Manured and Bare Areas Draining to the Pond:

Measure the total potential area drained to the pond. The spreadsheet will subtract the concrete and roof areas to determine the manured and bare areas.

Total Area drained to the pond _____ sq.ft.
Total Roof Area _____ sq.ft.
Concrete Areas _____ sq.ft.
Total manured and bare areas _____ acres

