



Completing the PDFA Report Completion Worksheet- Frequently Asked Questions (FAQs)

1. HOW DO I KNOW WHAT WATER BASIN PLAN DESIGNATION MY DAIRY IS LOCATED IN?

Basin Plan Designation	Counties/Areas Included:
Sacramento	Tehama, Glen, Sutter, Butte, Colusa, Yuba, Yolo, Solano, Sacramento (north of Cosumnes River)
San Joaquin	Contra Costa (portions of), Sacramento (south of Cosumnes River), San Joaquin, Stanislaus, Merced, Madera, Fresno (northeast side of county starting southwest of Millerton Lake and northwest side of county from south of Silver Creek north to Merced County, San Benito (east county)
Tulare	Fresno County (all except NE and NW portions listed above in San Joaquin Basin), Kings, Kern, Tulare

2. WHAT TYPE OF INFORMATION SHOULD I INCLUDE IN THE CHEMICAL USE SECTION AND WHERE MIGHT I GO TO GET IT?

Producers should contact their suppliers for product names and usage estimates.

Disinfectants: sanitizers, acids or basics, teat dips, etc.

Footbath chemicals: copper sulfate, mineral products, etc.

Pesticides: fly or rodent control products (only if used in areas where they will ultimately be stored in the retention pond)

Soaps: various manufactured soap products

Other chemicals:

3. HOW CAN I ESTIMATE THE “DAILY HOURS ON FLUSH”?

This should be thought of as the number of hours the cows will be on cement (*during the winter months*) where manure will be flushed to the retention pond. This should include time spent on feed and/or walking lanes as well as in the milk parlor area. The following are general numbers that can be used or modified for your facility.

Flushed freestall barns without corrals: 24 hours

Flushed freestall barn with corrals: ~ 16-20 hours

Corrals with flushed feed lanes: ~ 5-8 hours

Open corrals without flush: ~ 1-2 hours

4. HOW CAN I ESTIMATE FRESH WATER USAGE NUMBERS?

*Default values are available within the Preliminary Dairy Facility Assessment (PDF) Reporting Computer Software for this section if needed. ***Values provided in the software are quite generous as all varied dairy use patterns must be covered with default values. To avoid overestimating your water use and resulting storage needs, it is recommended that producers estimate their individual water use and use the “user override” option, so that results are better related to your specific operation. The equations and ranges below may assist producers in calculating site specific information.*

Equation key:

#’ = Number, ‘*’ = Multiplied by

Milk parlor floor wash numbers (gallons used per day):

- Traditional automatic parlor deck (floor) flush valve =
#MilkingsPerDay * approx. GPM * #min. each cycle * #runtimes per milking
- Traditional manual parlor deck (floor) flush (manual start flush or red barn hose):
*Manual start flush gallons = #flushes/milking * #gals/flush * #milkingsperday*
*Red barn hose washing gallons = ~30 gal/min. * #minwashdowntimepermilking * #milkingsperday*
- Continuous rotary / carousel deck wash =
Hoursmilkingperday * gpmflow * 60minperhour
** If you are not using water to queue cow exit, numbers may be lower.

Fresh water used in manure flush lanes (gallons):

Estimatedvolumeperflush * #flushesperday

Milk cooling fresh water use (gallons per day):

Producers should contact their milk equipment representative to obtain the most precise estimations for fresh water used for milk cooling on your facility. If that is not possible, the information below may assist you in estimating water usage numbers for your facility.

Water-cooled plate cooler: avegal milkpercowperday * ave. #cowsmilked *
#galwater/galmilkcooled (typically 2-4 gal water/1gal milk)
1 gallon milk = 8.6 pounds

Water-cooled vacuum pump: #hoursmilkingperday * ~5 gpm * 60minperhour

Water-cooled air compressor/chiller: [water-cooled compressor gpm + water-cooled chiller gpm]
* 60minperhour * #hoursrunperday

Water-cooled compressor gpm = ~5 gpm

Air-cooled compressor = 0 gpm

Water-cooled chiller = typically ~ 10-30 gpm

Hours run per day typically is equal to milking time per day.

Miscellaneous equipment fresh water use (gallons per day):

Examples to include in this category: automatic footbath water, milking unit backflush, drophoses, soakers, etc

Drop hose gpm = typically 3-5 gpm per drop hose

Sprinkler Pen:

Sprinkler run time: total amount of “on time” of sprinkler cycle per string

Average water flow rate of sprinklers in wash pen: depends on sprinkler type, typically ~4-5 gpm, unless low-volume heads are used. Check with supplier or on box labels.

5. WHAT IS DEAD STORAGE LOSS (DS) IN THE RETENTION POND / SETTLING BASIN SECTION AND HOW DO I CALCULATE IT?

Dead storage loss is the minimum operating level (ft.) often dictated by equipment such as floating pumps, fixed intakes, gravity flow outlets, etc. which may require several feet of clearance above the bottom of the pond for reliable operation. Estimate the vertical distance in feet from the bottom of the pond to the water level needed for continued reliable operation as the dead storage loss.

6. HOW DO I ESTIMATE MOISTURE CONTENT, TOTAL NITROGEN AND TOTAL PHOSPHORUS PERCENTAGES FOR MANURE EXPORTS?

Producers should refer to analysis taken of this material for your facility for the most accurate data. If past samples have not been analyzed, the following ranges may be helpful in estimating contents.

Manure Exports:

Manure Type	Volume Exported	Moisture Content	Total Nitrogen	Total Phosphorus
Separator Solids	tons	~ 85%	1-3 %	.20-0.80%
Corral Solids	tons	~50-70%	.5 – 3.0%	.3 – 1.3%
Liquid Manure	gallons	XXXXXX	230 – 830 mg/L	30 – 110 mg/L

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Information in this document was compiled by CDQAP to assist dairy producers in understanding and complying with the General Order Waste Discharge Requirements for Existing Milk Cow Dairies (Central Valley Regional Water Quality Control Board Order R5-2007-0035). Effort has been made to ensure accuracy, but these summaries are not official regulatory guidance and are not legal advice. Producers are advised that these summaries are not intended to be a substitute for producers reading the complete order and consulting their own legal counsel to ensure compliance with the waste discharge requirements. Should any information here conflict with the General Order and/or official information provided by the Regional Board, Board-provided information takes precedence.