XXXXXXXX
Water Harvesting at Sturgeon Creek Farm

XXXXXXXXXXXXXXXX

Jackson Owsley county line

XXXXXXXXXX

OFWMP Proposal

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TAG Reps on Visit:

Dale Booth (dale.booth@ky.gov)

Lee Moser (lee.moser@uky.edu)

Note: this document is intended for guidance purposes only.

Background

- No municipal water
- 2 bulls, 33 cows, 31 calves, 10 replacement heifers. Currently around 76 animals with the goal of around 100 animals.

Large Barn: Rainwater Harvesting

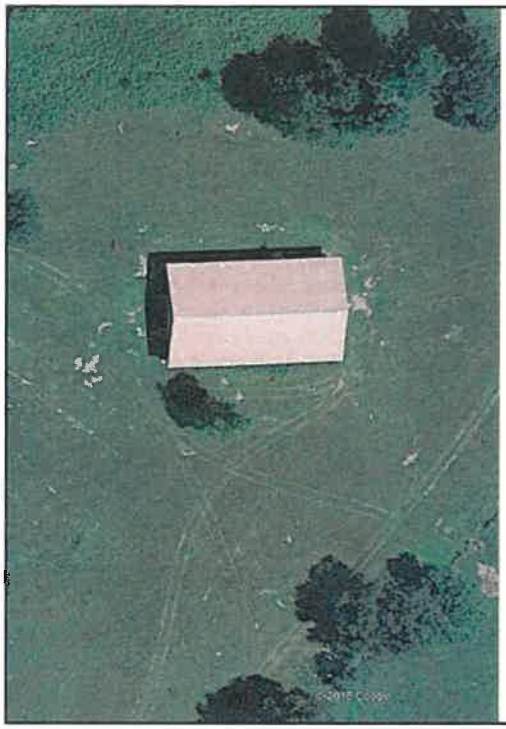
- Roof Area = 4608 ft^2 for barn and 846ft^2 for stack pad (5472ft^2)
- Generates 3,415 gallons of runoff per inch of precipitation
- If you have 100 animals consuming 15 gal a day your water demand is 1500 gal a day
- Based on weather data from the years 2011-2017, if you had unlimited storage capacity, the rainfall that occurred in those years could supply between 41.7-70.1% of your daily demand in the months of April-November so extra water would be necessary for part of the year.

Large Barn: Operational Needs

- Water source for livestock

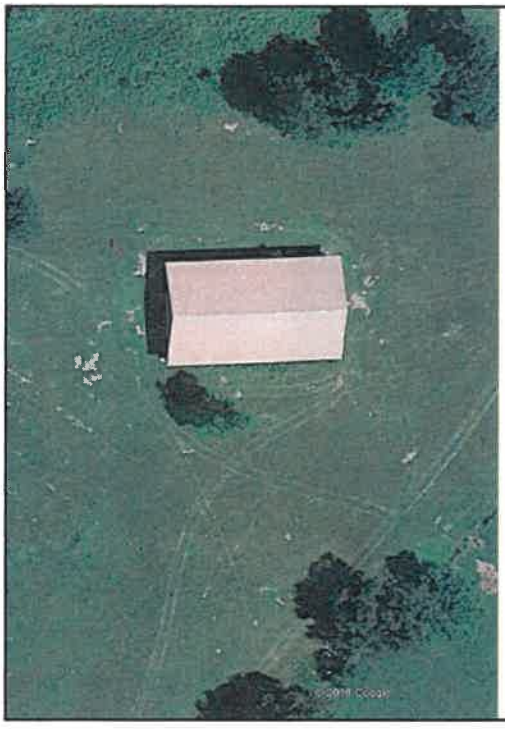
Large Barn: Practices

- Install gutters and in-ground storage tank (in-ground to avoid issues with freezing)
- Trench and lay pipe to a waterer system in the paddock area
- Pump system to move water from cistern to waterers



Barn 2: Rainwater Harvesting

- Roof area = 4,485 ft^2
- That equates to 2800 gal of runoff per inch of precipitation
- If you have 100 animals consuming 15 gal a day your water demand is 1500 gal a day
- A 3000 gal tank would give you 2 days capacity for water stored
- Based on weather data from the years 2011-2017, if you had unlimited storage capacity, the rainfall that occurred in those years could only supply between 34.2-58.5% of your daily demand in the months of April-November so extra water would be necessary for part of the year.



Barn 2: Operational needs

- Provide water to livestock

Barn 2: Practices

- Install gutters and in-ground storage tank (in-ground to avoid issues with freezing)
- Trench and lay pipe to a waterer system (new one near barn?)
- Pump system to move water from cistern to waterers

Pond 1: Expand to use as water source

- Provide water to livestock

Pond 1: Practices

- Deepen and expand pond
- Plumb a water line to a waterer down hill of dam for cattle.
- Suggestion: Fence pond and build reinforced water entrance areas for cattle access water but not loaf or cause widespread erosion

Pond 2: Use as water source

Pond 2: Practices

- Pump water from this pond to an uphill tank and gravity feed to waterers at lower elevations
- Solar pumps are an option here

Pond 3: Lower Priority. Expand old pond as water source

Pond 4: Lower Priority. Plumb pond downhill to where a bull lot will be built in future

Next Steps:

- Consult with NRCS or pond contractors about how much it will cost to expand Pond 1
- Start building your budget for the whole project. Once we have a cost we can determine where match is available
- The Ag Development Board has determined this week that they cannot reimburse farmers for their own labor, so there is not an hourly rate that you can charge for work you do in the project, unfortunately. You can, however, pay a contractor and be reimbursed. Apologies for any confusion there, I know I told you something different in our interview.
- Determine which project category meets your needs.
- Remember that the RDD farm will require you to do outreach to the farming community so your application should reflect how you plan to do that.
- The application is located on the KADF Project Portal Website. (https://agpolicy.ky.gov/funds/Documents/project_application.doc)
- Guidelines for PIP applications are located here: https://agpolicy.ky.gov/funds/Documents/project-guidelines_water-PIP.pdf
- Guidelines for RDD applications are located here: https://agpolicy.ky.gov/funds/Documents/project-guidelines_water-RDD.pdf

If you have any questions, please contact the Technical Advisory Group.

Dale Booth
502-782-6895
Dale.booth@ky.gov