LENAWEE CONSERVATION DISTRICT APPLICATION

Name:_____
Phone Number:_____ Email:_____
Mailing Address:_____

Next Level of Nutrient Management Best Management Practices (BMP)

This grant will take ***nutrient management*** to another level by linking technology to water quality, improving the efficiency, and amounts of P and N fertilizers applied to cropland fields using a 9 step process.

1. Change phosphorous recommendation parameters
2. Comprehensive soil sampling program
3. Create recommendation from past yield data
4. Manage/Keep pH at 6.6-7.0
5. VRT Nutrient Distribution. Broadcast & more efficient banding.
6. Improving N efficiency (Nitrogen sensor timing)
7. Improving planter performance through technology
8. Reducing overlap of nutrient application (chemical and fertilizer overlap)
9. Analyzing all data created with steps 1-8

Applicants must:

- Demonstrate adequate levels of current and/or future application of controlling on farm soil erosion
- Have some level of soil tests or working towards
- Have filter strips along streams or ditches on owned fields or working towards
- Have a drainage water management plan where suitable on owned property
- Higher ranking if MAEAP-Cropping System verified or working on and in a high priority sub-basin

Funds will be used to elevate current nutrient management practices to a higher level with technology, including cover crops with no-till or strip-till. **Rate per acre applied over acres of the operation will not exceed 70% of the cost to implement.** Contracts limitations will be set based on the size of the operation; < 1,000 acres-$30,000, 1,000-3,000 acres-$40,000, and > 3,000 acres-$50,000. Must have control of land for 3 years.

*Funds dispersed on a first come first serve basis as some practices have limited funds. Some of these practices may or may not impact USDA program payments. NO double dipping for practices already in a USDA program.

To qualify field must be in the Western Lake Erie Basin: Priority will be given to land located Black Creek, Lower River Raisin, South Branch of the River Raisin, Little River Raisin, and Macon Creek.

Where will implement of Practice (s) occur?

Township (s):_____ Section (s):_____ Total Number of Acres: _____

Signature of Operator:_____ Date: _____

***All practices will meet and follow NRCS standards and specifications, and must be maintained for the life-time of the practice.*

Next Level of Nutrient Management Best Management Practices (BMP)

Program Requirements	Practice *BMP Definition*	Grant Funds/ Acre	Check Practice (s) Interested in Implementing	Payment Amount (LCD Staff Only)
	Managing the Soil			
Mandatory	**Zone or Grid Sampling using a P Cutoff Application of 30 ppm vs. 45 ppm**	**N/A**		
No additional P applied with soil test values > 30 ppm instead Tri-State recommendation of 45 ppm				
Mandatory	**Yield Data Driven Fertilizer Prescriptions (Minimum 2.5-acre Grid or Zone Soil Sampling)**	**N/A**		
Geo referenced P prescriptions created from last season's spatial yield map in lieu of crop yield goal. (minimum 2.5-acre grid soil sampling or zones based on yield)				
Mandatory	**Yield Monitor with GPS**	**$6.00**		
GPS driven equipment required for recording crop removal for fertilizer, seeding recommendations, and data analysis.				
Mandatory	**Mapping/Prescription Services**	**$0.75**		
Using collected soil and spatial yield maps to create prescriptions.				
Optional	**1 acre Grids (every 6 years)**	**$10.00**		
1-acre grid samples provide denser data which has shown a 25% more accurate soil test. These prescriptions would lead to more efficient use of Phosphorus. Highly recommended for changing P application parameters and pH management.				
Optional	**VRT Manure Application**	**$22.50**		
Using flow meters and P maps to develop field prescriptions in zones for all forms of organic waste.				
Mandatory	**Mapping/Prescription Services-Manure**	**$0.75**		
Using collected soil and spatial yield maps to create prescriptions.				
Optional	**Intensive pH Sampling Raising pH to 6.6-7**	**$8.75**		
As pH lowers P becomes soluble and could be lost by leaching to tile lines. Keeping the pH at 6.6-7.0 will keep soluble P in check to be released later when crop can use it. This practice is recommended on crops where the soil test P is high with soils that tend to have a lower natural pH. pH data will be checked a minimum of every three years as well as P levels in the soil.				
	Planter Technology			
Optional	**Planter Base Display and GPS**	**$5.00**		
The display records and controls all BMP's listed below. GPS is required for mapping of spatial attributes.				
Optional	**Injecting Liquid 10-34-0 Starter or Pop-up VRT at Planting**	**$5.00**		
Additional technology required to work with GPS display for placement of where Phosphorus is needed.				
Optional	**V-Application of Individual Fertilizer Shutoff**	**$3.25**		
Individual row shutoff technology working with GPS display to eliminate overlap.				
Optional	**Singulation: Module for Monitoring**	**$1.50**		
Technology working with GPS display that is needed to monitor seed placement for more efficiency.				

Next Level of Nutrient Management Best Management Practices (BMP)

Continued

Program Requirements	Practice BMP Definition	Grant Funds/ Acre	Check Practice (s) Interested in Implementing	Payment Amount (LCD Staff Only)
	Planter Technology (continued)			
Optional	**Uniform Emergence Down Force**	**$4.50**		
Technology working with GPS display to sense soil bulk density providing required down pressure for optimum seed placement allowing improved emergence and quality stands that provides improved nutrient uptake for healthy growing plants.				
Optional	**Spacing: Electric Drives**	**$3.00**		
Technology working with GPS display minimizing vibration of seed meter transmission providing improved seed spac-				
Optional	**RTK GPS**	**$2.00**		
More accurate GPS signal used for improving controlled traffic, strip-till, auto shutoffs, and other functions. Improves				
Optional	**Auto Steer**	**$2.00**		
GPS machine steering reducing over application of fertilizer, pesticides, seed and improve planting time and machine				
	Other Practices			
Optional	**GPS Nitrogen Sensor**	**$22.50**		
Sensors working with GPS display mounted on side-dress nitrogen applicator that senses crop health and applies				
Optional	**Late Season N Application (V8 or V10)**	**$10.00**		
Nitrogen application equipment working with sensors for late season N application. As applied field application maps will be provided with total N applied and correlated with yield mapping at a later date.				
Optional	**Cover Crops & No-till or Strip-till**	**$50.00**		
This practice is for controlling sheet and rill erosion and improving soil health that works together for optimum plant nutrient up take and soil erosion control. A live cover crop that over winters and is correlated to a minimum 50% residue cover at planting time. (3-year commitment) Annual field visits required for residue calculations and visual observance of cover crops and % cover after planting.				
Optional	**Strip-till Unit (8 rows)**	**$60.00**		
This practice is considered a stepping stone to no-till corn leaving a minimum of 50-67% residue cover through creating a tilled strip 8-12 inches wide while incorporating N, P, and K in the strip. Reduces sheet and rill erosion by 50-70% greatly mitigating the loss of P attached to sediment leaving cropland fields.				
Optional	**Sprayer Auto Shut-off**	**$2.25**		
This practice is designed for application equipment eliminating overlap of products being applied to the crop.				
Mandatory	**Data Analysis & Decision Making**	**N/A**		
Data analysis of these BMP practices for on farm value and grant performance. These include soil sample data, prescriptions on a field by field basis based on soil samples with previous crop removal and new P threshold level of 15-30 ppm, as applied maps for all fertilizer applications, planting operations and prescriptions, annual yield mapping by field and crop, annual singulation and downforce reports will be analyzed by field.				

Rate per acre applied over acres of the operation will not exceed 70% of the cost to implement.

Conservation Contract

- Participants enter into this contract with the Lenawee Conservation District to implement and or maintain specific conservation practices, as set forth in the District application.
- Participant (s) agree: A) to implement and maintain conservation practices for the life (3 years) of this agreement on the plan map in compliance with the Standards and Specifications of the Best Management Practice, and other special program criteria obtained from the local Lenawee Conservation District field office. B) To forfeit further payments under this agreement and refund the Lenawee Conservation District, in amounts determined by the Lenawee Conservation District if there has been violation of the material terms of this agreement. Payment adjustments could be considered as the Lenawee Conservation District may deem appropriate.

Signature	
Date	
SSN or TAX ID (if applicable)	

Year	2019	2020	2021	Total
Contract Dollars				

PROVISIONS FOR RELEASE OF PAYMENTS

- The total amount of funds released will be based on the performance of installation of proposed best management practice (s) with supporting documentation, listed below.
  - *Soil tests based off removal or recommendation levels
  - *Fertilizer prescription based on crop removal
  - *Yield maps
  - *As applied maps
- No funds will be released until installation and inspection by Lenawee Conservation District Staff.
- Funds are dispersed on a quarterly basis after practice inspection, review of bills and receipts and approval by EGLE. Quarterly dates are December, March, June, September. It is important that inspections and review of bills and receipts be completed a minimum of two weeks prior to end of quarters.

Reviewed/Approved by Lenawee Conservation District Board of Directors on _____.

Return Application to:
Lenawee Conservation District
Attention: Lindsay Garrison
1100 Sutton Rd, Adrian, MI 49221
(517) 263-7400, Ext. 3, lindsay.garrison@mi.nacdnet.net