**2023 BEAN CREEK WATERSHED**

**WATER QUALITY GRANT APPLICATION**

Name:

Phone Number: Email:

Mailing Address:

**Putting It All Together! A Systems Approach to Reducing Nutrient Loss from Cropland Fields in The Bean Creek Watershed.**

The grant will assist landowners into mitigating P and N loss from their farms using a three-leg process striving for a complete systems approach. These include:

* Control all erosion on the farm: Sheet and Rill Erosion, Concentrated Flow
* Field Edge Treatment of Surface and Subsurface discharge water
* High Level Nutrient Management Systems

**Applicants Must:**

* Demonstrate adequate levels of current and/or plans for future application of controlling on farm soil erosion.
* Have at least zone soil samples done within the last 4 years.
* Willing to establish filter strips on owned property along streams or ditches.
* Working towards a minimum of a MAEAP verification in the cropping system.
* Must have control of rented land throughout the contract term.

Funds will be used to incentivize management practices, equipment, and structural practices through a **Rate per acre applied or a not to exceed 75% of the cost to implement planned practices**

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.

**All cropland fields are eligible within the Bean Creek, but priority will be given to the Covell Drain, Lime Creek and Silver Creek**

Where will implement of Practice (s) occur?

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

Signature of Operator: Date:

**Contract Limits**

**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‐$35,000, 1,000‐3,000 acres‐$45,000, and > 3,000 acres‐$55,000. Must have control of land for 5 years.

**In Field Structural Soil Erosion and Water Quality Practices**

***.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Practice** | **Unit** | **% Cost or $ per acre** | **Check Practices**  | **Estimate of Program Funds Requested** |
| **Critical Area Treatment** :  | **ac** | **75%** |  |  |
| *Shaping and seeding areas where surface water concentrates from smaller watersheds but needs to be in permanent cover* |  |  |  |  |
| **Diversions:** | **feet** | **75%** |  |  |
|  *Directing surface water causing surface erosion to another area that is stabilized* |  |  |  |  |
| **Grad Stabilization Structures:**  | **each** | **75%** |  |  |
| *Surface water quick change in elevation causing the need to stabilize the area.* |  |  |  |  |
| **Grass Waterways**:  | **acres** | **75%** |  |  |
| *Concentrated flow or gully erosion caused by runoff from larger watersheds needing shaping and permanent grass*. |  |  |  |  |
| **Water and Sediment Control Basins:** | **each** | **75%** |  |  |
| *Cross slope fill that stores , slows down runoff and releases the water to an underground outlet.* |  |  |  |  |
| **Blind Inlet:**   | **each** | **75%** |  |  |
| *Inlet for surface water that is released through a stone/soil filter before entering underground outlet to surface waters* |  |  |  |  |

**FIELD EDGE WATER QUALITY PRACTICES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Practice** | **Unit** | **% Cost or $ per acre** | **Check Practices**  | **Estimate of Program Funds Requested** |
| **Grass Filter/Buffer Strips**:  | **acres** | **$1,000** |  |  |
| *A maintained grass/forbs cover that filters runoff and provides a stable buffer between a cropland field and surface water. Maintain 1 year establishment and 5 years after* |  |  |  |  |
| **Harvestable Buffer Strips:** | **acres** | **$150/ac/3yr** |  |  |
| *A grass filter strip or buffer that will be harvested 1 or 2 times per year to remove P from plant growth. \*3 annual payments within 5 year period.*  |  |  |  |  |
| **Structures for Water Control:**  | **each** | **75%** |  |  |
| *Installation of a structure that can manage water table in a buffer strips or in a flat portion of a cropland field* |  |  |  |  |
| **Saturated Buffers:**  | **ac** | **90%** |  |  |
| *A filter strip and or buffer that manages subsurface drainage water within a minimum 30- foot strip* |  |  |  |  |
| **Two Stage Ditches:**  | **feet** | **75%** |  |  |
| *A designed project that stabilizes a surface water ditches and is designed to filter in-stream nutrients***.** |  |  |  |  |

|  |
| --- |
| **In Field Agronomic Practices for Water Quality** |
| **Practice** | **Unit** | **% Cost or $ per acre** | **Check Practices**  | **Estimate of Program Funds Requested** |
| **Long-Term Grass Legume Seeding\*** | **ac** | **150/ac** |  |  |
| *Replacing row crop rotation with a 6-year seeding of a permanent cover. Must be on fields that have been in row crop and no alfalfa/grass cover as part of a long term rotation.* |  |  |  |  |
| **Small grain rotation ( once in three years)\***  | **ac** | **$50/ac** |  |  |
| *A rotation that utilizes Phosphorus in high soil test fields, improves soil health reduces soil loss from cropland fields while reducing commercial P application in the rotation \** |  |  |  |  |
| **Bio-diversity Rotation:** Minimum of 4 separate crops with cover crops installed 2 times in the rotation.\* | **ac** | **$100/ac** |  |  |
| **Cover Crops with No-till/Strip-till Management System** | **ac** | **$60.00/ac** |  |  |
| *Control of sheet and rill erosion on cropland while improve soil health. 5-year commitment. \*one time payment*  |  |  |  |  |

|  |
| --- |
| **High Level Nutrient Management Practices** |
| **Managing the Soil** |
| **Practice** | **Unit** | **% Cost or $ per acre** | **Check Practices**  | **Estimate of Program Funds Requested** |
| **Grid Sampling and Variable Rate Application of P, K and Lime:** | **ac** | **$6.00** |  |  |
| Grid or zone samples to implement: *P applied in areas > 10 ppm verses Tri-State Recommendations* | **ac** | **$20/ac** |  |  |
| **Yield data driven Fertilizer Prescription:**  | **ac** | **$1.00/ac** |  |  |
| *Geo-referenced P prescriptions created from spatial yield maps in lieu of crop yield goal.* |  |  |  |  |
| **Yield Monitor with GPS** | **Each** | **50%** |  |  |
| *GPS driven equipment required for recording crop removal of p to make next years variable rate prescriptions* |  |  |  |  |
| **1-acre Grid Sampling (sample every 6 years)** | **ac** | **$10.00/ac** |  |  |
| *1 acre grid samples for improved accuracy of soil tests. These prescriptions would lead to more efficient us of P.*  |  |  |  |  |
| **Intensive PH Management Keeping PH from 6.5-7.0** | **ac** | **$8.75/ac** |  |  |
| *Highly recommended in areas of high P levels and low ph. Higher PH makes P more soluble and available*. |  |  |  |  |
| **VRT Manure Application** | **Ac or %** | **22.50/ac or 50%** |  |  |
| *Applying livestock waste based on P levels in the soil as outlined by a prescription that applies livestock waste based on crop P removal rates: ½ to 2 x crop removal.* |  |  |  |  |
| **Planter Technology** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Planter Base Display; Singulation Module with GPS** | **ac** | **$6.50/ac** |  |  |
| *Record planting singulation and other GPS spatial attributes* |  |  |  |  |
| **Injecting 10-34-0 starter fertilizer with Variable Rate Technology** | **ac** | **$5.00/ac** |  |  |
| *Adding to work with GPS display for variable rate spreading and injection of starter fertilizer.* |  |  |  |  |
| **Uniform Emergence Down Force (no-till planters)** | **ac** | **$5.00/ac** |  |  |
| *One of the most important items to have when in a no-till system. Uniform spacing and planting depth throughout field improves crop health and nutrient uptake.* |  |  |  |  |
| **Spacing: Electric Drives (no-till planters)** | **ac** | **$5.00/ac** |  |  |
| *Minimizing seed skips and doubles improving crop health and nutrient uptake* |  |  |  |  |

|  |
| --- |
| **Other Technology**  |
| **Auto Steer with RTK GPS** | **ac** | **$4.00/ac** |  |  |
| *More accurate GPS signal used for improving controlled traffic, auto shutoffs and other functions that lead to reduction of over application of fertilizer, pesticides, and seed.* |  |  |  |  |
| **GPS Nitrogen Sensors** | **ac** | **$23.00/ac** |  |  |
| *Sensors working with GPS display mounted on a side dress nitrogen applicator that senses crop health and applies required N based on crop need.* |  |  |  |  |
| **Variable Rate Nitrogen Application** | **ac** | **6.00/ac** |  |  |
| *Side dress application with prescriptions based on location, organic matter, yield maps and producer knowledge* |  |  |  |  |
| **Late Season N Application (V8-V10)** | **ac** | **$10/ac** |  |  |
| *N application equipment ( y drops) that applies N Later in the season.*  |  |  |  |  |
| ***Nozzle by Nozzle Shutoff on Sprayer***  | **ac** | **$5.00/ac** |  |  |
| *High tech equipment designed to eliminate overlap of all products being applied to a crop* |  |  |  |  |

\*\*Rate per acre applied over acres of the operation will not exceed 75% of the cost to implement

**Conservation Contract**

* Participants who enter this contract with the Lenawee Conservation District to implement and or maintain spe ciﬁc 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** | **2023** | **2024** | **2025** | **2026** | **2027** | **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 .