

Land Conservation • Office of Lakes & Watersheds • Parks • Water Resource Engineering

RCPP MOU: WI #: A-5F48-15-05; NHQ #: 14-C-WI-453

Project Title: Reducing Total Phosphorus and Sediment Loads in the Yahara Watershed through

Wisconsin's Adaptive Management Option

Report Type: Semi-Annual

Report Period: 10/1/2016 to 3/31/2017

Report Date: 4/30/2017

**Deliverable Item #1: Conservation Practice Implementation** 

Deliverable Item #1A: NRCS Financial Assistance

During the reporting period, one NRCS-RCPP-EQIP signup period was held with a batching date of March 3<sup>rd</sup>, 2017. NRCS staff along with Dane County Land and Water Resources Department (DCLWRD) staff worked together in completing 12 NRCS-RCPP-EQIP applications. The types of practices that were included in the applications are listed below (Table 1) along with the total unit amounts for each practice. A total of \$262,177.00 is estimated to be obligated in cost share assistance from NRCS for the identified practice.

Table 1. Identified NRCS conservation practices and corresponding units from March 3<sup>rd,</sup> 2017 NRCS-RCPP-EQIP batching deadline.

| Code | Practice                  | Units | Amount  |
|------|---------------------------|-------|---------|
| 340  | Cover Crop                | Ac    | 4,975.7 |
| 558  | Roof Runoff Structure     | No    | 2       |
| 382  | Fence                     | Ft    | 9758.0  |
| 512  | Forage and Biomass        | Ac    | 15.2    |
| 528  | Prescribed Grazing        | Ac    | 197.4   |
| 614  | Watering Facility         | No    | 5       |
| 516  | Livestock Pipeline        | Ft    | 2,426.0 |
| 561  | Heavy Use Area Protection | Sq ft | 100     |

As part of the final RCPP proposal, it was estimated that roughly \$237,500.00 in NRCS financial assistance would be obligated in fiscal year 2017 (Figure 1). As of 3/31/2017, eleven NRCS-RCPP-EQIP contracts have been obligated for a total of \$262,177.00 in fiscal year 2017. A list of practices and total units by fiscal year under NRCS contract is available in Table 2.

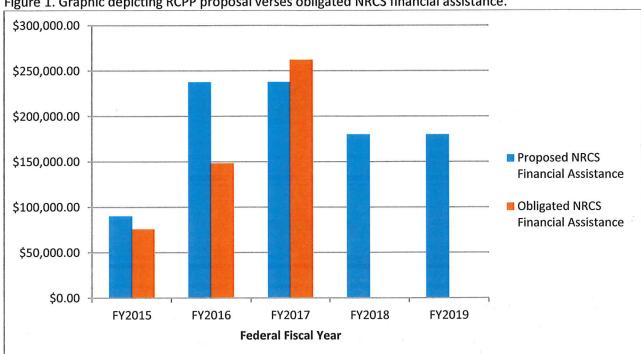


Figure 1. Graphic depicting RCPP proposal verses obligated NRCS financial assistance.

Table 2. NRCS contracted conservation practices and corresponding units.

|      |                                     |       | FY 2015             | FY 2016 | FY 2017 |
|------|-------------------------------------|-------|---------------------|---------|---------|
| Code | Practice                            | Units | Amount              | Amount  | Amount  |
| 110  | Grazing Management Plan             | no    |                     | 2       |         |
| 104  | Nutrient Management Plan            | no    |                     | 1       |         |
| 340  | Cover Crop                          | ac    | 172.4               | 723     | 4,975.7 |
| 342  | Critical Area Planting              | ac    | 0.2                 |         |         |
| 362  | Diversion                           | ft    | 325                 | 485     |         |
| 382  | Fence                               | ft    | 1000                |         | 9758.0  |
| 410  | Grade Stabilization Structure       | no    | 1 1 1 1 1 1 1 1 1 1 | 1       |         |
| 412  | Grassed Waterway                    | ac    | 1.3                 | 1.5     | 1       |
| 468  | Lined Waterway or Outlet            | ft    | 600                 | 235     | 1       |
| 484  | Mulching                            | ac    | 0.7                 | 3.1     |         |
| 500  | Obstruction Removal                 | ac    | 0.1                 | 0.1     | 7       |
| 512  | Forage and Biomass                  | Ac    |                     |         | 15.2    |
| 516  | Livestock Pipeline                  | Ft    |                     |         | 2,426.0 |
| 528  | Prescribed Grazing                  | Ac    | , 1 <sub>9</sub>    |         | 197.4   |
| 558  | Roof Runoff Structure               | no    |                     | 1       | 2       |
| 560  | Access Road                         | ft    | 150                 | 4       |         |
| 561  | Heavy Use Area Protection           | sq ft |                     | 4256    | 100     |
| 578  | Stream Crossing                     | no    | 1                   | 2       |         |
| 580  | Streambank and Shoreline Protection | ft    | 200                 |         | ¥       |
| 590  | Nutrient Management                 | ac    | 232.5               |         |         |
| 614  | Watering Facility                   | No    | ki.                 |         | 5       |

| 620 | Underground Outlet        | Ft | 256 |  |
|-----|---------------------------|----|-----|--|
| 632 | Waste Separation Facility | no | 1   |  |
| 635 | Vegetated Treatment Area  | ac | 635 |  |

#### Deliverable Item #1B: DCLWRD Financial Assistance

Two DCLWRD conservation cost share agreements were completed during the reporting period. The total amounts and general location of all DCLWRD implemented practice are available in Table 3 and Figure 2. Total DCLWRD cost share funding allocated for the conservation practices was \$193,998.52.

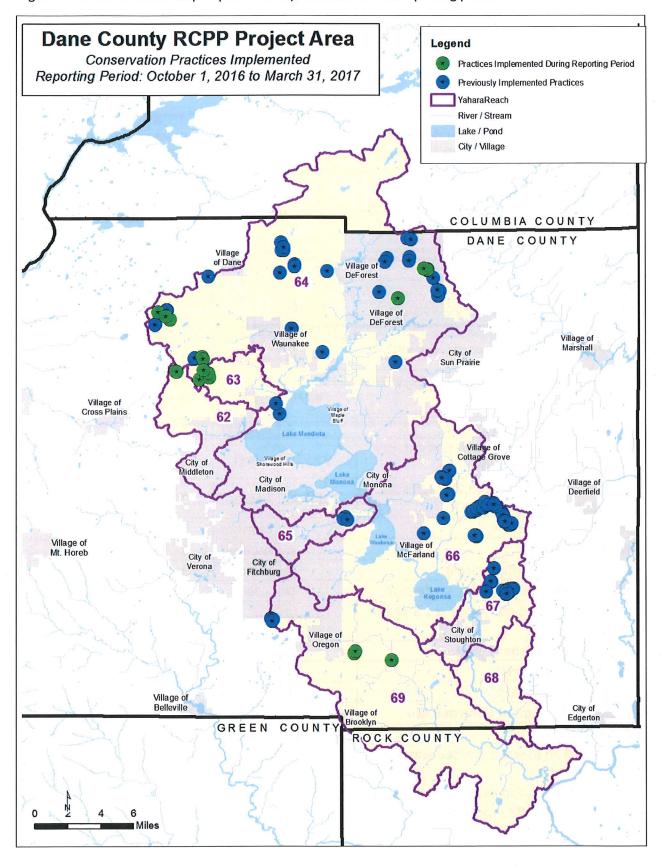
Table 3. DCLWRD conservation practices implemented during the reporting period as well as cumulative totals to date.

| Conservation Practices – Deliverable Items #1B                     | Target<br>Quantity | Units  | Amou<br>Install<br>(During t<br>Repo | ed Amount Installed ort (Cumulative |
|--|--------------------|--------|--------------------------------------|-------------------------------------|
| Cover Crops (1,500 acres est. per year x 5 years)                  | 7,500              | acres  | 0                                    | 0                                   |
| Diversions (900 feet est. per year x 5 years = 4,500)              | 4,500              | feet   | 0                                    | 1650                                |
| Grade Stabilization Structures                                     | 4                  | number | 0                                    | 1                                   |
| Grassed Waterways (2,250 feet est. per year x 5 years = 11,250)    | 11,250             | feet   | 340                                  | 16,400                              |
| Nutrient Management (3,750 acres est. per year x 5 years = 18,750) | 18,750             | acres  | 0                                    | 779                                 |
| Roof Runoff Structure  | 3                  | number | 0                                    | 1                                   |
| Roofs and Covers   | 4                  | number | 0                                    | 1                                   |
| Sediment Basins (Barnyards)  | 2                  | number | 0                                    | 0                                   |
| Stream Bank and Shoreline Protection                               | 750                | feet   | 0                                    | 0                                   |
| Terrace (750 feet est. per year x 5 years = 3,750)                 | 3,750              | feet   | 0                                    | 0                                   |
| Vegetative Treatment area  | 2                  | acres  | 0                                    | 0                                   |
| Waste Storage Facility   | 3                  | number | 1                                    | 3                                   |
| Wetland Restoration  | 3                  | acres  | 0                                    | 0                                   |
| Water and Sediment Control Basin                                   | NA                 | number | 0                                    | 1                                   |
| Access Control   | NA                 | Acres  | 1.9                                  | 2.9                                 |

<sup>\*</sup>Assumed an average grassed waterway width of 32 feet.

NA – Target quantity was not established as part of the RCPP proposal.

Figure 2. General location map of practices implemented for the reporting period.



#### Deliverable Item #1C: NRCS Technical Assistance for NRCS Staff

Tracking of NRCS Technical Assistance is not required for reports.

#### Deliverable Item #1D: NRCS Technical Assistance Funding to DCLWRD

DCLWRD continues to assist producers with the planning and implementation of all conservation practices identified in Deliverable Item #1A. During the reporting period 153 different individuals were contacted and made aware of the cost share funding through this RCPP project.

Table 4. Number of producer contacts/participation.

|                        |          |        | Quantity       |                    |
|------------------------|----------|--------|----------------|--------------------|
|                        | Target   |        | (During the    | Quantity           |
|                        | Quantity | Units  | Report Period) | (Cumulative Total) |
| Producer Participation | 360      | number | 153            | 242                |

DCLWRD is requesting a total of \$11,160.00 of NRCS technical assistance funding for this reporting period for Conservation Planning and Installation of Low Intensity Structural Practices, Conservation Planning and Installation of Medium Intensity Structural Practices, and Conservation Planning and Installation of Management Practices (Table 5). See Attachment F for all supporting deliverable documentation.

Table 5. Requested technical assistance reimbursement by deliverable for RCPP reporting period.

| Item No. | Deliverable  | Total         |    | nding<br>quested |
|----------|--|---------------|----|------------------|
| i.       | Conservation Planning for RCPP-EQIP Low Intensity Structural Practice.   | \$<br>46,400  | \$ | 2 ,400           |
| ii.      | Conservation Planning for RCPP-EQIP Medium Intensity Structural Practice.  | \$<br>93,600  | \$ | 1,600            |
| iii.     | Conservation Planning for RCPP-EQIP High Intensity Structural Practice.  | \$<br>6,900   | \$ | 11               |
| iv.      | Practice Installation for RCPP-EQIP Low Intensity Structural Practice.   | \$<br>46,000  | \$ | 2,400            |
| v.       | Practice Installation for RCPP-EQIP Medium Intensity Structural Practice.  | \$<br>74,750  | \$ | 1,300            |
| vi.      | Practice Installation for RCPP-EQIP High Intensity Structural Practice.  | \$<br>5,850   | \$ |                  |
| vii.     | Conservation Planning for RCPP-EQIP Management Practices.  | \$<br>25,000  | \$ | 500              |
| viii.    | Practice Installation for RCPP-EQIP Management Practices.  | \$<br>18,000  | \$ | 360              |
| ix.      | RCPP-EQIP Nutrient Management (590) Plan Review  | \$<br>9,000   | \$ |                  |
| x.       | Trainings Conducted to Agricultural Producers (sessions)   | \$<br>8,000   | \$ | 800              |
| xi.      | Annual RCPP-EQIP Contract Review   | \$<br>11,500  | \$ | .00              |
| xii      | RCPP-EQIP Contract Coordination Formal Meetings with NRCS Field Office   | \$<br>30,000  | \$ | 1,800            |
|          | Total RCPP-EQIP Technical Assistance requested funding to DCLWRD  Total requested reimbursement for reporting period | \$<br>375,000 | ¢  | 11.160           |
|          | Remaining RCPP-EQIP Technical Assistance funding (Balance)   | \$<br>356,550 | \$ | 11,160           |

#### Deliverable Item #1E: DCLWRD Technical Assistance

The total technical assistance dollars associated with assisting landowners and producers with implementing the conservation practices under DCLWRD agreements within the project area was \$14,000.00.

#### **Deliverable Item #2: Innovative Conservation Practice Implementation**

#### Deliverable Item #2A: DCLWRD Financial Assistance

#### **Harvestable Buffers**

For this reporting period no financial assistance has been allocated for the implementation of Harvestable Buffers.

#### Low Disturbance Manure Injection (LDMI)

For this reporting period two agreements were entered into for the purchase and implementation of LDMI equipment. A total of \$18,598.20 was allocated in financial assistance for the purchase of the equipment. Implementation will be verified this fall.

#### Community Manure Processing and Storage Pilot

For this reporting period no financial assistance has been allocated for the implementation of a Community Manure Processing and Storage Pilot.

#### **Drainage Ditch and Stream Dredging**

During the reporting period, additional sediment samples and water quality samples were collected and sent to the WI State Lab of Hygiene for analysis. Technical assistance funding provided by DCLWRD for the sample analysis was \$30,912.67.

Table 6. Innovative conservation practices implemented during the reporting period.

| Innovative Practices – Deliverable Item #2    | Target<br>Quantity | Units  | Amount Installed<br>(During the<br>Report Period) | Amount Installed<br>(Cumulative Total) |
|---|--------------------|--------|---|--|
| Harvestable Buffers                           | 65                 | acres  | 0   | 73.3                                   |
| Low Disturbance Manure Injection (LDMI)       |                    | acres  | 0   | 0                                      |
| Community Manure Processing and Storage Pilot | 1                  | number | 0   | 0                                      |
| Drainage Ditch and Stream Dredging            | 1,350              | feet   | 0   | 200                                    |

#### Deliverable Item #2B: DCLWRD Technical Assistance

#### **Harvestable Buffers**

For this reporting period no technical assistance has been allocated for the implementation of Harvestable Buffers.

#### Low Disturbance Manure Injection

For this reporting period technical assistance was provided for the purchase and implementation of two Low Disturbance Manure Injection agreements. Verification of implementation will occur this

fall. Total technical assistance funding provided for these two agreements was \$1,636.80 and took roughly 30 hours of staff time.

#### **Community Manure Processing and Storage Pilot**

For this reporting period no technical assistance has been allocated for the implementation of Community Manure Processing and Storage Pilot.

#### **Drainage Ditch and Stream Dredging**

Technical assistance funding provided by DCLWRD for the project during this reporting period was \$4,364.80. This funding included the time staff has spent evaluating results from water and sediment samples collected from the pilot location.

#### Deliverable Item #3: Monitoring

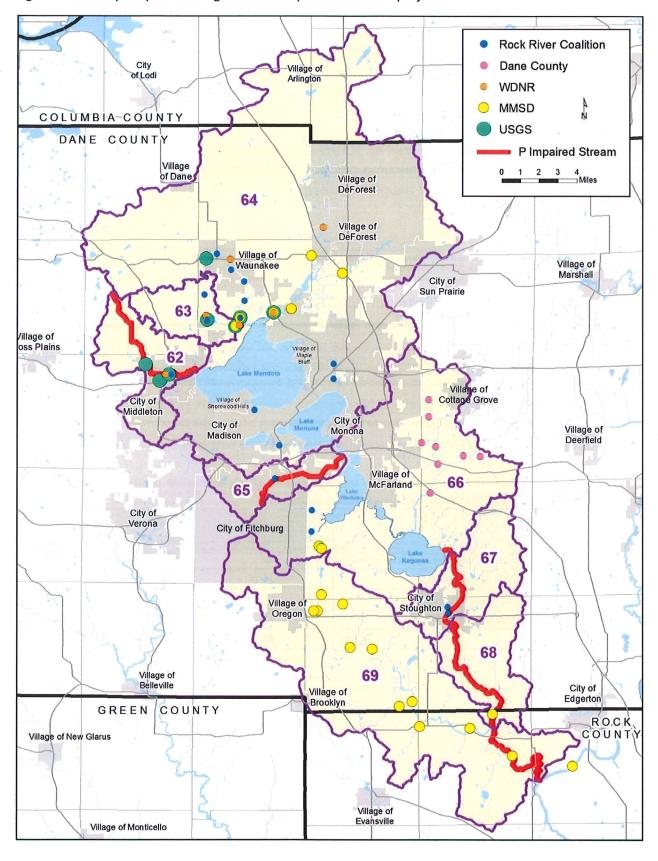
#### Deliverable Item #3A: In-Stream Water Quality Monitoring

During the reporting period a total of 301 water quality samples were analyzed for the project area (Table 7). This included samples collected by both the Citizen Volunteer Monitoring Program as well as USGS water quality monitoring stations and Dane County as part of the Door Creek Watershed Project. All samples were analyzed for Nitrate + Nitrite, Ammonia-N, Total Kjeldahl Nitrogen, Orthophosphate (Dissolved Reactive), Total Phosphorus, and Total Suspended Solids. All samples were analyzed by the Madison Metropolitan Sewage Districts certified lab. The location of all sampling points are provided in Figure 3. Attachment 1 also includes a summary of the water quality data collected from four USGS stream gauges located within the project area.

Table 7. The number of water quality samples taken within the project area and the associated costs for analysis.

|                              | Number of<br>Samples | <b>Total Cost</b> |
|------------------------------|----------------------|-------------------|
| Citizen Volunteer Monitoring | 67                   | \$4,951.00        |
| USGS Monitoring              | 229                  | \$17,765.00       |
| Dane County-Special          | 5                    | \$369.00          |
| Samples (Door Creek)         |                      |                   |
| Total                        | 301                  | \$23,085.00       |

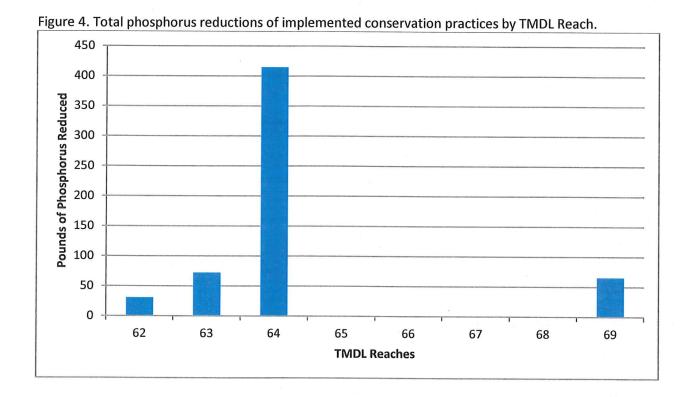
Figure 3. Water quality monitoring locations as part of the RCPP project.



#### Deliverable Item #4: Quantification, Verification, and Tracking of Phosphorus Reductions

#### Deliverable Item #4A: Phosphorus Tracking

As a result of the conservation practices implemented during the reporting period, 582 pounds of phosphorus was calculated to be reduced. These reductions were calculated using the best available models and WDNR approved methodologies as part of the adaptive management effort. These models include: SNAP Plus, BARNY, P8, and sediment loss multiplied by a phosphorus concentration. Calculated phosphorus reductions have been tabulated by both TMDL impaired reach as well as conservation practices implemented (Figure 4 & 5).



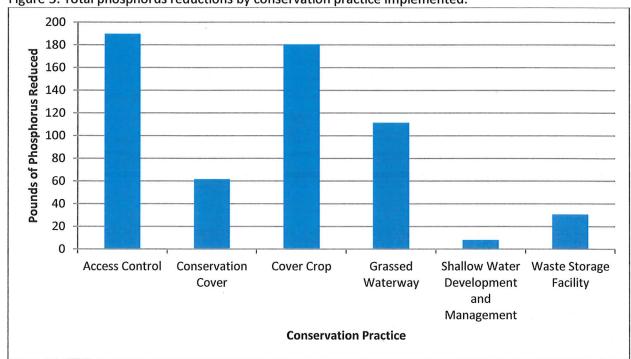


Figure 5. Total phosphorus reductions by conservation practice implemented.

#### **Deliverable Item #5: Watershed Management Plan**

#### Deliverable Item #5A: Watershed Management Plan

Dane County is no longer seeking EPA and DNR approval for the *Door Creek Watershed Action Plan* to meet the 9-Key Elements outlined by EPA. However, this plan continues to be implemented using RCPP and partner resources.

#### Deliverable Item #6: Outreach and Education

Deliverable Item #6A: Ag Innovation Days

Ag Innovation Days was not held during the reporting period.

#### **Deliverable Item #6B: Conservation Conference**

Yahara Pride Farms, with support from Clean Lakes Alliance, hosted its annual Watershed Conference on March 2, 2017, at the Comfort Inn and Suites in DeForest, WI. Experts shared information on modern sustainable agriculture that can be applied to farms locally and beyond. The free conference attracted approximately 100 attendees. It included a panel discussion about cover crop economics, as well as presentations on farm-conservation innovations and best practices featuring local farmers, extension professionals and industry representatives.

Dr. Dave Andersen, assistant professor of Agricultural and Biosystems Engineering at Iowa State University, gave a talk about manure economics and application decisions, while Dane County's Joe Parisi (County Executive) and Kyle Minks (Land and Water Resource Department) spoke about the forthcoming legacy phosphorus dredging project. In addition to the panel discussion and presentations, the event included lunch and several program updates from Yahara Pride Farms leadership and the Yahara WINs adaptive management program.

Cost of the conference was approximately \$5,000, which included expenses related to catering, conference center rental, staff time for promotion and coordination, and printing of program materials. Expenses were predominantly covered by sponsorships and Clean Lakes Alliance in-kind support. Attachment 2 contains the conference agenda.

#### Deliverable Item #6C: Farm Tour

A Farm Tour was not held during the reporting period.

# Attachment 1

Water Quality Monitoring Report

#### 3. Water Quality Monitoring

Meeting water quality criteria for phosphorus is the end goal of adaptive management, and therefore water quality monitoring is a necessary component of adaptive management plans. Yahara WINS advanced two water quality monitoring initiatives as part of the pilot program: a USGS monitoring program that used sophisticated monitoring gages, and a citizen water quality monitoring program that engaged volunteers and provided additional water samples from across the watershed. Data from both of these efforts contributed to a more robust data set for establishing current conditions in the watershed at the outset of the full-scale project. These initiatives are identified and discussed below.

#### **USGS Monitoring**

Four (4) United States Geological Survey (USGS) water gaging stations were installed as part of the pilot project. Gaging station locations were selected based on input from Dane County and USGS. The locations are listed below and are shown in **Figure 11**:

- Six Mile Creek at Highway 19
- Six Mile Creek at Highway M
- Dorn Creek at Highway Q
- Dorn Creek at Highway M

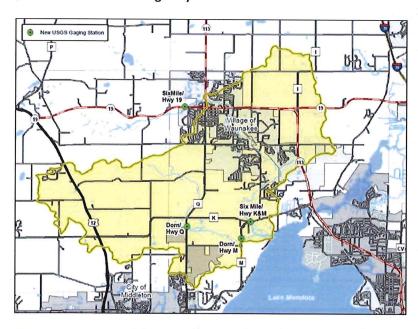


Figure 11: Locations of USGS gaging stations in pilot watershed

Three of the gages were located within the pilot project area, and the fourth (Six Mile Creek at Highway 19) was located upstream of the pilot project area. In January, 2014 water quality monitoring was added at an existing USGS gaging station on the Yahara River at Fulton. This is the furthest downstream monitoring station on the Yahara River before it discharges to the Rock River.

Continuous streamflow and water quality were measured at the gages (example gage shown in **Figure 12**). Water quality samples were collected monthly during baseflow (low-flow) periods and on a variable timestep basis by an autosampler during significant storm-runoff periods. For storm events, 8-12 samples were generally submitted for each significant runoff period. Best professional judgment was used by USGS staff to select those samples that appeared to best characterize the variability associated with each runoff period.



Figure 12: USGS Water Sampling Gage

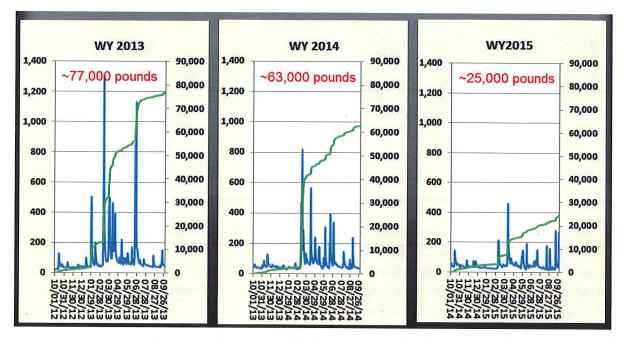
Water quality monitoring parameters included total phosphorus, dissolved ortho-phosphorus, nitrate plus nitrite, ammonium nitrogen, total Kjeldahl nitrogen, total suspended solids, and chlorophyll. All water quality samples were analyzed at the MMSD laboratory. Algorithms used by USGS allowed for the daily computation of concentrations and loads for the measured parameters.

In-stream phosphorus concentrations for 2013-2015 at each of the gaging locations are shown in **Table** 5. The concentrations represent the computed median concentration on the 15<sup>th</sup> of each month during the growing season (May-October). This is a different computational method than was used to calculate concentrations shown in previous annual reports. However, use of this metric appears to be consistent with the criterion established by the Wisconsin Department of Natural to make decisions to add or delete waters from the existing Impaired Waters List (WisCALM Guidance).

| Table 5: Phosphorus Concentra | ations at USGS Moni | toring Locations |      |
|-------------------------------|---------------------|------------------|------|
| Site                          | 2013                | 2014             | 2015 |
| Dorn Creek at Hwy Q           | 0.10                | 0.13             | 0.11 |
| Dorn Creek at Hwy M           | 0.22                | 0.26             | 0.25 |
| Six Mile Creek at Hwy 19      | 0.22                | 0.34             | 0.13 |
| Six Mile Creek at Hwy M       | 0.14                | 0.20             | 0.18 |
| Yahara River at Fulton        | <u>-</u>            | 0.14             | 0.19 |

The applicable phosphorus numeric water quality criterion is 0.075 mg/L for the Dorn Creek and Six Mile Creek sites, and 0.10 mg/L for the Fulton site. Computed median concentrations at all of the above sites exceeded the applicable numeric water quality criterion. This was not unexpected, and it will likely take many years for water quality samples to begin to reflect implementation of conservation/phosphorus reducing practices on the landscape. Factors that could impact response time include location, soil test phosphorus levels in the contributing watershed, the extent to which in-stream concentrations are impacted by legacy phosphorus in stream sediments, timing and extent of precipitation events, etc.

The installation of the four new gages in the pilot project allowed researchers to estimate the phosphorus loads entering Lake Mendota for the four major tributaries. A graphic showing the cumulative phosphorus load as a function of flow is shown below.



Of note is that total phosphorus loads in water years 2014 and 2015 (WY2014 and WY2015) were significantly different, even though the amount of precipitation during each year was similar. However, the amount of snowmelt runoff was very small in 2015 relative to 2014, and the rainfall in 2015 was more evenly distributed, indicating that annual precipitation is not necessarily a good indicator of runoff phosphorus loading.

#### **Citizen Water Quality Monitoring**

Yahara WINS provided funding to the Rock River Coalition to implement a volunteer citizen water quality monitoring program. This monitoring effort produced data set supplemented the USGS data set, and gave interested citizens an opportunity to be directly involved in the Yahara WINS effort. The Rock River Coalition effort began in 2013, with additional monitoring sites added each year of the project. **Figure 12** shows the number of sites per year of the pilot project that had corresponding phosphorus data as reported by the MMSD lab. Monitoring sites in 2013 were intentionally located next to existing USGS gages to develop confidence in the data generated through the volunteer monitoring program, and then were expanded to other locations in the watershed.

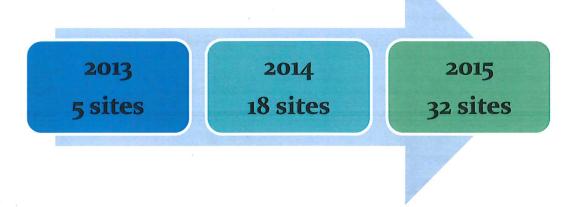


Figure 13 - Number of Citizen Nutrient Monitoring Sites through Rock River Coalition

Water quality with respect to phosphorus was highly variable, which was expected. In 2015, six sampling sites had growing season (May-October) median phosphorus concentrations below 0.075 mg/L, with three of those sites located in Token Creek. The growing season median phosphorus concentration for sites sampled in 2015 ranged from 0.04 mg/L to 0.95 mg/L. The growing season median concentration for all sites sampled in 2015 was 0.13 mg/L.

Both the USGS data and citizen monitoring data indicated that the studied water bodies were commonly above the numeric water quality criterion.

#### 4. Preparing for Transition from a Pilot Project to a Full-Scale Project

Early pilot project efforts focused on implementing a robust water quality monitoring program and evaluating baseline conditions related to phosphorus in the pilot project area. Over the course of the pilot, the project's focus and activities evolved to start paving the way for a full-scale watershed adaptive management project. This was accomplished by:

- Expanding water quality monitoring efforts and implementation of conservation/phosphorus reducing practices to areas outside of the pilot project watershed.
- Answering regulatory questions through conversations with DNR and EPA.
- Developing the administrative structure and agreements for the full-scale adaptive management project, including the adaptive management plan.
- Writing the adaptive management plan that will guide the implementation of the full-scale project and be attached to MMSD's discharge permit for phosphorus compliance.

In anticipation of transitioning to a full scale adaptive management project, MMSD staff engaged in discussions with the WDNR regarding adaptive management as a TMDL compliance strategy. Those discussions led to the development of a Memorandum of Understanding between MMSD and WDNR that was executed in December 2014. The MOU addressed:

The development of an adaptive management plan and how the plan would be used

#### Attachment 2

Watershed-Wide Conference Agenda

# 2017 Yahara Pride Farms Watershed-Wide Conference Thursday, March 2: 10 a.m. – 2:30 p.m.



10-10:30 a.m. | Registration, booth viewing

#### 10:30 a.m.| Panel Presentation

"Cover Crops: Economics, innovations and best practices"

Moderated by Heidi Johnson, crop and soils educator, Dane County UW-Extension

#### Panelists include:

- Nick Viney, Badgerland Grain Farms, LLC, Evansville
- Damon Reabe, Reabe Spraying Service, Waupun
- Jamie Patton, agriculture educator, Shawano County UW-Extension

#### 11:30 a.m. | Field update

 YPF field consultants Dennis Frame, Pat Murphy and Joe O'Connor discuss 2016 trends and 2017 programs

#### 12 - 12:30 p.m. | Lunch

#### 12:20 p.m. | Yahara WINs update

• During lunch, Dave Taylor from Madison Metropolitan Sewerage District will provide an update on the Yahara WINs adaptive management full-scale program

#### 12:30 p.m. | Presentation

"Manure economics and application decisions – where are we headed?"

Dr. Daniel Andersen, assistant professor of Agricultural and Biosystems Engineering, Iowa State University

#### 1:15-1:20 p.m. | Break

#### 1:20-2:00 p.m. | *Presentation*

"Dane County's legacy phosphorus removal project: Past, present, future"

Kyle Minks, conservation and nutrient specialist, Dane County Land and Water Resources Department

#### 2 - 2:30 p.m. | YPF leadership update and open forum

- Moderated by Jeff Endres, chair, Yahara Pride Farms
- Discuss questions and concerns
- 2017 Cost-share program early sign-ups
- 2016 Cost-share check distribution

#### 2:30 p.m. | Program concludes

# Attachment E Contribution Tracking

Attachment E

WI #: 68-5F48-15-05

NHQ #: 14-C-WI-453

# **ATTACHMENT E - CONTRIBUTION TRACKING**

|             |   |                       |                       | Contributic          | Contribution Amount Total (\$) Per Deliverable Per Reporting Period | (\$) Per Deliv       | erable Per Re         | porting Peric        | , p                   |                      |                                   |        |                    |
|-------------|---|-----------------------|-----------------------|----------------------|---|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------------------|--------|--------------------|
| Item<br>No. | Deliverable   | 5/15/15 to<br>9/30/15 | 10/1/15 to<br>3/31/16 | 4/1/16 to<br>9/30/16 | 10/1/16 to<br>3/31/17   | 4/1/17 to<br>9/30/17 | 10/1/17 to<br>3/31/18 | 4/1/18 to<br>9/30/18 | 10/1/18 to<br>3/31/19 | 4/1/19 to<br>9/30/19 | 10/1/19 to<br>Project End<br>Date | Total  | <u></u>            |
| ,           |   | 20 575 35 4           | 5                     |                      | 00 111 00   |                      |                       |                      |                       |                      |                                   | Ш      |                    |
| 1 A.        | NRCS Financial Assistance DCLWRD Financial Assistance | \$ 75,767.00          |                       | \$ 148,276.42        | \$ 262,177.00   |                      |                       |                      |                       |                      |                                   | \$ 486 | 486,220<br>677,486 |
| 1 D.        | NRCS Technical Assistance Funding to DCLWRD           | \$ 900.00             | \$ 2,260.00           | ·                    | · v   |                      |                       |                      |                       |                      |                                   | 1      | 18,450             |
| 1 E.        | DCLWRD Technical Assistance                           | \$ 59,843.21          | \$ 2,728.00           | \$                   | s   |                      |                       |                      |                       |                      |                                   |        | 97,031             |
|             |   |                       |                       |                      |   |                      |                       |                      |                       |                      |                                   |        |                    |
| ,           | DCLWRD Financial Assistance                           |                       |                       |                      |   |                      |                       |                      | ,                     |                      |                                   |        |                    |
| 2 A.        | (Innovative Conservation Practice                     |                       |                       |                      |   |                      |                       |                      |                       |                      | 5                                 |        |                    |
|             | Implementation)                                       | \$ 213,390.66 \$      | 36,497.00             | \$ 80,859.09         | \$ 49,510.87  |                      |                       |                      |                       |                      |                                   | \$ 380 | 380,258            |
|             | DCLWRD Technical Assistance                           |                       |                       | 2                    |   |                      |                       |                      |                       |                      |                                   |        |                    |
| 2 B.        | (Innovative Conservation Practice                     |                       |                       |                      | 19  |                      |                       |                      |                       |                      |                                   |        |                    |
|             | Implementation)                                       | \$ 13,515.40 \$       | 16,376.1              | 12 \$ 62,175.80      | \$ 6,001.60   |                      |                       |                      |                       |                      |                                   | \$ 98  | 690'86             |
| 2           |   | - 1                   |                       |                      |   |                      |                       |                      |                       |                      |                                   |        |                    |
| 3 A.        | In-Stream Water Quality Monitoring                    | \$ 17,000.00 \$       | \$ 23,100.00 \$       | 30,928.79            | \$ 23,085.00  |                      |                       |                      |                       |                      |                                   | \$ 94  | 94,114             |
| <           |   | - 1                   | 1                     | -                    | -   |                      |                       |                      |                       |                      |                                   |        | ĭ                  |
| 4<br>Ā      | Phosphorus Tracking                                   | ¢ 00.216,01 ¢         | ¢   00.505,1 ¢        | ¢   09.760'/ ¢       | 1,636.8U  |                      |                       |                      |                       |                      |                                   | , 7T   | 71,551             |
| 5 A.        | Watershed Management Plan                             | \$ 60,000.00          | 1                     | 1                    | 1   |                      |                       |                      |                       |                      |                                   | \$ 60  | 000'09             |
|             |   |                       |                       |                      |   |                      |                       |                      | •                     |                      |                                   |        |                    |
| 6 A.        | Ag Innovation Days*                                   | \$ 708.00             | -                     | \$ 1,775.00          | -   |                      |                       |                      |                       |                      |                                   | \$ 2,  | 2,483              |
| 6 B.        | Conservation Conference                               | -                     | \$ 1,437.37           |                      | 00:000'5 \$   |                      |                       |                      |                       |                      |                                   | \$ 6,  | 6,437              |
| 9 C.        | Farm Tour   | \$ 2,537.53           | ı                     | \$ 3,555.29          |   |                      |                       |                      |                       |                      |                                   | \$ 6,  | 6,093              |

\*Note that in 2015 Ag Innovation Days was replaced with WI Farm Technology Days

\$ 1,948,192 Total Contribution: \$ 782,532.40 | \$ 84,308.09 | \$ 514,781.99 | \$ 566,569.79 | \$

NRCS Financial Assistance contributions will be provided by NRCS to DCLWRD for inclusion in progress reports. NRCS Technical Assistance for NRCS Staff (Deliverables 1C) is not required to be tracked by reporting period.

DCLWRD will maintain additional itemized tracking documentation to support the total contribution amounts recorded above. DCLWRD will provide the itemized tracking documentation to NRCS if requested.

#### Attachment F

Documentation of Deliverables/Performance

Attachment F WI #: 68-5F48-15-05 NHQ #: 14-C-WI-453

# ATTACHMENT F - DOCUMENTATION OF DELIVERABLES/PERFORMANCE

|      |   |               |      |                       |           | WIDU | PD Comp    | DCI WPD Completed Amount  | DCLWI       | 2D Comp    | DCI WRD Completed Amount | _           | TWED     | omnlete     | DCI WRD Completed Amount        | DCLV                       | DCI WRD Completed Amount | nleted A                 | mount     | DCI.WRD Completed Amount | D Comp     | leted An  | nount     |
|------|---|---------------|------|-----------------------|-----------|------|------------|---------------------------|-------------|------------|--------------------------|-------------|----------|-------------|---------------------------------|----------------------------|--------------------------|--------------------------|-----------|--------------------------|------------|-----------|-----------|
|      |   |               |      |                       |           |      | (Quantity) | tity)                     |             | (Quantity) | (Quantity)               |             | 9        | (Quantity)  | 100                             |                            | (Quantity)               | (Quantity)               | 010       | G                        | (Quantity) | ity)      | 910       |
| No.  | Deliverable   | Quantity Unit | Unit | Rate (\$)<br>Per Unit | Total     | rec  | eral Fisca | rederal Fiscal Year ZOLOS | \$107/16/21 | 9102/16/6  | 9102/06/9                | 9107/05/6   |          | 01 L10Z/1/F | \$\frac{1007\05\6}{\text{01}}\$ | 03 7102/1/01<br>7102/1E/21 | 8102/17                  | 810Z/0E/9<br>01 810Z/1/F | 8107/05/6 | 8102/15/21               | 6107/15/5  | 6107/05/9 | 6107/05/6 |
| 1 D. | NRCS Technical Assistance Funding to DCLWRD   |               |      |                       |           |      |            |                           |             |            |                          |             |          |             |                                 |                            |                          |                          |           |                          |            |           |           |
|      | Conservation Planning for RCPP-EQIP Low Intensity Structural Practice. Includes site visit, foundation investigation, survey, design documentation, construction drawings, specifications, operation and maintenance, and quality assurance plan. See below for list of low intensity structural practices.                       | 116           | each | \$ 400                | \$ 46,400 |      |            |                           | S           |            | н                        |             |          | v           | =                               |                            |                          |                          |           |                          |            |           |           |
|      | Conservation Planning for RCPP-EQIP Medium Intensity Structural Practice. Includes site visit, foundation investigation, survey, design documentation, construction farwings, specifications, operation and maintenance, and quality assurance plan. See below for list of medium intensity structural practices.                 | ت<br>111      | each | 800<br>\$             | \$ 93,600 |      |            |                           |             |            | 2                        |             |          | 7           |                                 |                            |                          |                          |           |                          |            |           |           |
|      | Conservation Planning for RCPP-EQIP High Intensity Structural Practice. Includes site and management assessment, foundation investigation, survey, design documentation, construction drawings, specifications, operation and maintenance, and quality assurance plan. See below for list of high intensity structural practices. | m             | each | \$ 2,300              | 006'9 \$  |      |            | ii.                       |             |            |                          |             |          |             |                                 |                            |                          |                          |           |                          |            |           |           |
|      | Practice Installation for RCPP-EQIP Low Intensity Structural Practice. Includes layout, quality assurance, iv. check-out, and completion of as-built. See below for list of low intensity structural practices.   | 115           | each | \$ 400                | \$ 46,000 |      |            |                           |             |            | 11                       |             |          | 9           |                                 |                            |                          |                          |           |                          |            |           |           |
|      | Practice Installation for RCPP-EQIP Medium Intensity Structural Practice. Includes layout, quality assurance, check-out, and completion of as-built. See below for list of medium intensity structural practices.   | t 115         | each | \$ 650                | \$ 74,750 |      |            |                           |             |            | 2                        |             |          | 7           |                                 |                            |                          |                          |           |                          |            |           |           |
|      | Practice Installation for RCPP-EQIP High Intensity Structural Practice. Includes layout, quality assurance, check-out, and completion of as-built. See below for list of medium intensity structural practices.   | ю<br>Н        | each | \$ 1,950              | \$ 5,850  |      |            |                           |             |            | ,                        |             |          |             |                                 |                            |                          |                          |           |                          |            |           |           |
|      | vii. Conservation Planning for RCPP-EQIP Management vii. Practices. See below for list of management practices.   | 100           | each | \$ 250                | \$ 25,000 |      |            |                           |             | 2          | н                        |             |          | 7           |                                 |                            |                          |                          |           |                          |            |           |           |
|      | Practice Installation for RCPP-EQIP Management viii. Practices. See below for list of management practices.   | 100           | each | \$ 180                | v,        |      |            |                           |             | 2          | п                        |             |          | 7           |                                 |                            |                          |                          |           |                          |            |           |           |
|      | ix. RCPP-EQIP Nutrient Management (590) Plan Review   | 30            | each | \$ 300                | 000'6 \$  |      |            |                           |             | +          | +                        | I           | +        |             | 1                               |                            |                          |                          |           |                          | T          | T         |           |
|      | x. Trainings Conducted to Agricultural Producers (sessions)   |               | each | \$ 800                | s         |      |            |                           |             | 1          |                          |             | $\dashv$ | н           |                                 |                            |                          |                          |           |                          |            |           |           |
|      | xi. Annual RCPP-EQIP Contract Review  | 100           | each | \$ 115                | \$ 11,500 |      |            |                           |             |            |                          | <u>Ц</u>    | +        | +           |                                 |                            |                          |                          |           |                          |            | 1         |           |
|      | Xii RCPP-EQIP Contract Coordination Formal Meetings with NRCS Field Office  | 100           | each | \$ 300                | \$ 30,000 |      |            | 8                         |             | 2          | $\dashv$                 | _ <br> <br> | $\dashv$ | 9           |                                 |                            |                          |                          |           |                          |            |           |           |
| !    |   |               |      | į                     | 275 000   |      |            |                           |             |            |                          |             |          |             |                                 |                            |                          |                          |           |                          |            |           |           |

Total \$ 375,000

We certify the above task associated with, and intended by, this agreement have been completed as identified above; including the required documentation for the completed deliverable quantity. We further certify that no funds associated with this agreement have been by as a fratch against any ower federally funded program.

22

The following is the list of Low Intensity Structural Practices. 560-Access Road, 309-Agrichemical Handling Facility, 326-Clearing & Snagging, 362-Diversion, 561-Heavy Use Area Protection, 527-Karst Sinkhole Treatment, 484-Mulching, S00-Obstruction Removal, 521A-Pond Sealing or Lining, Flexible Membrane, 521D-Pond Sealing or Lining, Compacted Clay, Treatment, 654-Road/Trailing/Landing Closure and Treatment, 558-Roof Runoff Structure, 572-Spoil Spreading, 574-Spring Development, 570-Stormwater Runoff Control, 578-Stream Crossing, 606-Subsurface Drain, 575-Trails and Walkways, 620-Underground Outlet, 635-Vegetated Treatment Area, 642-Water Well, 351-Water Well Decommissioning, 614-Watering Facility.

Attachment F WI #: 68-5F48-15-05 NHQ #: 14-C-WI-453

The following is the list of Medium Intensity Structural Practices. 316-Animal Mortality, Facility, 396-Aquatic Organism Passage, 317-Composting Facility, 656-Constructed Wetland, 410-Grade Stabilization Structure, 412-Grassed Waterway, 468-Lined Waterway or Outlet, 516-Livestock Pipeline, 576-Livestock Shelter Structure, 533-Pumping Plant, 367-Roofs and Covers, 350-Sediment Basin, 395-Stream Habitat Improvement and Management, 580-Streambank and Shoreline Protection, 587-Structure for Wildlife Control, 600-Terrace, 360-Waste Plants and Covers, 360-Waste Plants and 360-Waste Plants an

The following is the list of High Intensity Structural Practices. 366-Anaerobic Digester and 313-Waste Storage Facility.

Management practices associated with deliverable items 1 D vii and viii include: 314-Brush Management, 327-Conservation Cover, 228-Conservation Crop Rotation, 332-Contour Buffer Strips, 330-Contour Farming, 340-Cover Crop, 342-Critical Area Planting, 332-Fence, 386-Field Border, 393-Filter Strips, 394-Firebreak, 512-Forage and Biomass Planting, 511-Forage Harvest Management, 315-Herbaceous Weed Control, 391-Riparian Forest Buffer, 612-Tree/Shrub Establishment, 490-Tree/Shrub Preparation, 380-Windbreak/Shelterbelt Establishment, 650-Windbreak/Shelterbelt Renovation.

NRCS shall provide to DCLWRD the contract information and/or conservation practice information; prior to DCLWRD starting any work on completing a deliverable.

Note: The expectation is that significant progress will be accomplished during each year of the project to ensure the deliverable items are fully completed by the end of the project

# Documentation

The following documentation must accompany the SF-270 Request for Reimbursement for each deliverable item quantity completed

| 1 D i, ii, iii | Site and management assessment, foundation investigations (if applicable), survey, design documentation, construction drawings, specification, operation and maintenance and quality assurance plan.   |
|----------------|--|
| 'A 'AI O T     | Practice layout documentation, quality assurance documentation, check-out, and completion of as-built.   |
| 1 D vii        | Practice installation plan including job sheets for the planned conservation practice.   |
| 1 D viii       | Practice layout documentation, quality assurance documentation, check-out, and completion of as-built.   |
| 1 D ix         | Nutrient Management (590) Plan review findings.  |
| 1D×            | Agenda and participant names.  |
| 1 D xi         | Conservation assistance notes (CPA-6) or equivalent which identifies the field visit meeting date with the contract participant and a detailed narrative report on the conservation practices operation and maintenance plan status. Photo documentation shall also be required. |
| 1 D xii        | Date of meeting, names of participants in attendance, and summary notes.   |

# **Cover Crop Meeting for Farmers February 10, 2017**

Email announcement in partnership with UWEX and Yahara Pride Farms advertising the February 10<sup>th</sup> information meeting:





**YaharaWINs** 

On behalf of Jeff Endres, chairman

2017 is the start of the full-scale adaptive management program in the Yahara watershed. In order to continue working toward phosphorous reduction goals, we must make use of all funding sources available to farmers in the watershed. The offer below is particularly lucrative as a means to increase cover crop implementation. Please consider this program as you make 2017 planting decisions.

-Jeff

### Take part in a large-scale aerial seeding of cover crops in the Yahara Watershed!

A note from Heidi Johnson, Dane County UW-Extension

We are looking for farmers to participate in a large scale project to aerial seed a barley cover crop in to standing/growing corn silage acres in 2017. Financial assistance of **\$62/acre** is available to participating farmers through the Dane County Land and Water Resource Department (LWRD) and the Natural Resource Conservation Program (NRCS).

The estimated total cost of the aerial seeding, including seed, will likely cost \$30-35/acre (using locally grown, bin run seed). The cost will not exceed \$43/acre. In either case, farmers will receive financial assistance that far exceeds the actual cost of seeding.

Yahara WINs will also provide a signing bonus to farmers who sign up for the aerial seeding project for three years!!

Dane County LWRD conservation staff are available to assist farmers through the planning and application process. The airplane and barley seed will be secured for the project, farmers will just need to communicate with the pilot on specific seeding dates and field locations.

An informational session to learn more about the project will be held on: **Friday Feb. 10 at 11am at 5201 Fen Oak Dr., Room 121.** The pilot who will conduct the seeding will be at this event to answer questions.

Questions? Call Heidi Johnson (Dane County UW-Extension Crops and Soils Agent) at 608-224-3716 or <a href="mailto:johnson.heidi@countyofdane.com">johnson.heidi@countyofdane.com</a>

#### This email sent on behalf of:

Yahara Pride Farms, Dane County UW-Extension and Yahara WINs

#### **About Yahara Pride Farms**

Established in 2012, Yahara Pride Farms is a farmer-led 501c(3) non-profit organization that strives to preserve agricultural heritage while simultaneously encouraging farmers to engage in proactive environmental stewardship within the Yahara Watershed. Participating farms employ practices that result in the preservation and enhancement of soil and water resources for today, and for generations to come. For more information, visit <u>yaharapridefarms.org</u>.



Yahara Pride Farms 229 Douglas Dr Brooklyn, WI 53521

Update your Email Preferences or Unsubscribe



#### Summary of February 10th meeting:

Approximately 8-10 producers and agronomists attended the meeting. Presentations were conducted by UWEX, NRCS, Dane County, Yahara Pride Farms, and Dairyland Aviation. Time was provided at the end for producers to work with Dane County staff on the next steps for signing up, reviewing eligibity and completing RCPP EQIP applications for cover crops.



Damon Raebe, Dairyland Aviation



Jeff Endres, Yahara Pride Farms



Heidi Johnson, Dane County UW-Extension

#### Attendees:

Heidi Johnson

Jeff Endres

Pat Murphy

**Adam Dowling** 

Damon Raebe

Steve Ottelien

Laurie Lambert

**Amy Callis** 

Pattie Haack

Eric Bircshbach

Haley Krakow

**Gary Ripp** 

**Bruce Sime** 

Richard Maier

**Dennis Ripp** 

Joe Connors

# Cover Crop Initiative for Yahara RCPP Project Meeting Summaries

#### January 5, 2017

Agenda: Aerial cover crop program partnership with Yahara WINS

Attendees: Amy Callis (Dane County), Adam Dowling (NRCS), Heidi Johnson (UWEX), Dave Taylor

(Yahara WINS/MMSD), Kathy Lake (Yahara WINS/MMSD)

Summary: Discussed program concept, use of RCPP EQIP funds, and potential for additional supporting

funds or incentive payments from Yahara WINS to encourage participation.

#### January 17, 2017

Agenda: Implementation components of aerial cover crops

Attendees: Amy Callis (Dane County), Adam Dowling (NRCS), Heidi Johnson (UWEX)

Summary: Discussed the steps, questions and processes to identify outreach, education, applications,

logistics and processes to implement an aerial cover crop program using RCPP EQIP funds.

#### January 20, 2017

**Agenda:** Check-in regarding aerial cover crops program and discuss pre-meeting with Yahara Pride Farm representatives

Attendees: Amy Callis (Dane County), Adam Dowling (NRCS), Heidi Johnson (UWEX), Laurie Lambert

(Dane County), Steve Ottelien (Dane County), Marie Raboin (Dane County)

**Summary:** Discussed questions regarding the RCPP EQIP application process through NRCS, logistics associated with working with the pilot for aerial seeding, advertising the program, options for participants not interested in aerial seeding, hosting a cover crop meeting for producers and agronomists, and preparations for meeting with Yahara Pride Farm representatives.

#### January 23, 2017

Agenda: Aerial cover crop program partnership with Yahara Pride Farms

Attendees: Amy Callis (Dane County), Adam Dowling (NRCS), Heidi Johnson (UWEX), Laurie Lambert (Dane County), Steve Ottelien (Dane County), Marie Raboin (Dane County), Pat Murphy (Yahara Pride Farms)

**Summary:** Discussed the concept of the program, outreach options in partnering with Yahara Pride Farms, upcoming meeting for producers and agronomists to learn more, application process through RCPP EQIP, incentive program offered by Yahara WINS, and details of the aerial seeding component of the cover crop program.

#### February 27, 2017

Agenda: Check-in regarding aerial cover crops program

Attendees: Amy Callis (Dane County), Adam Dowling (NRCS), Heidi Johnson (UWEX), Laurie Lambert

(Dane County), Steve Ottelien (Dane County), Marie Raboin (Dane County)

Summary: Discussed logistics associated with verifying fields eligible for flight paths for aerial seeding

and finalizing RCPP EQIP applications for the March 3<sup>rd</sup> batching deadline as well as discussed

presentation materials for the March 2<sup>nd</sup> Yahara Pride Farms Watershed Meeting.

#### March 30, 2017

Agenda: Status of March 3<sup>rd</sup> batching deadline and next steps for June 2<sup>nd</sup> batching deadline

Attendees: Amy Callis (Dane County), Adam Dowling (NRCS), Heidi Johnson (UWEX), Laurie Lambert (Dane County), Steve Ottelien (Dane County), Marie Raboin (Dane County)

**Summary:** Discussed the RCPP EQIP application response, status, acres, available funding and next steps from the March 3<sup>rd</sup> batching deadline as well as outreach opportunities and application process for the upcoming June 2<sup>nd</sup> batching deadline.