

**Drain Infrastructure Transactions for Clean H2O (D.I.T.C.H.)**

**The Nature Conservancy**

**Randy Dell**

**August 4, 2017 - July 31, 2022**

**69-3A75-17-288**

## **1. Project Summary**

The Drainage Infrastructure for Clean H<sub>2</sub>O (D.I.T.C.H.) project successfully demonstrated a new funding and delivery mechanism for best management practices, such as vegetative buffer strips, that keep soil on farmland and out of waterways thereby reducing future maintenance costs of publicly managed drain systems. Vegetative buffers are an important and under-utilized management practice, with broader adoption needed to meet water quality challenges. The Nature Conservancy, Michigan Farm Bureau, Monroe County Drain Commissioner, Saginaw County Public Works Commissioner, and the Washtenaw County Water Resources Commissioner collaborated to create technically and legally defensible assessment tools that were utilized in four initial pilots in Michigan for the installation and maintenance of buffer strips. Landowners that agreed to maintain a buffer or the duration of the contract (e.g., 10 years) were eligible for a modified drainage assessment bill. Participating landowners entered into agreements with the county drainage/water commission and realized an average one-time financial benefit of approximately \$1,700/acre of buffer. A compelling feature of the program was the flexibility of the buffer contracts where existing and newly created buffers were equally eligible for the modified drainage assessment, complimenting available cost-share programs, incentivizing the creation of new buffers and also the maintenance of buffers in expired/expiring cost-share contracts that otherwise would be brought back into production. Drain officials benefited from reduced future maintenance costs while also gaining additional access to drains for inspections and other work. The success and lessons learned from the pilots were shared with county drain officials, agency staff, engineering and legal consultants, and conservation stakeholders across the state of Michigan for further adoption in the fall and winter of 2019-2020. Additional Michigan counties are in various stages of initial pilots as are discussions for pilots in additional Midwestern states.

## **2. Project Goal and Objectives**

The DITCH project set out to demonstrate a methodology for how farmland drainage assessments could be modified to better recognize and financially reward landowners utilizing Best Management Practices that have proven benefits to reduce future maintenance costs of public drains. The team set out to create a series of tools and provide drain official and farmer-landowner support for 1-3 to pilots. This included:

1. Create drain coefficients for performance drain assessments and assist county drain commissioners to pilot their use in property drain assessments rolls.
2. Outreach materials and Frequently Asked Questions for use with landowners.
3. Outreach materials and Frequently Asked Questions for drain professionals.
4. Presentations to at least two drain commissions and municipalities.
5. Creation of a Drain Management Company, or entity.
6. Protocol landowner contracts for program participation.
7. Outreach to drain professionals: the project team will present the project at least one Michigan Association of County Drain Commissioners conference, submit a publication to the MACDC's publication *Pipeline*, and other outreach materials to target drain professionals in other Midwestern states.
8. Financial analyses to determine investment need and worthiness of approach, and if appropriate an investment prospectus to secure private capital.

### **3. Project Background**

Throughout the Midwest and other cropland rich regions, public drains play a vital role in maintaining and improving cropland productivity through the expedient removal of excess storm water. This infrastructure is typically overseen by county and/or drainage district officials and boards, that working collaboratively with local landowners, have taxing and management authority to maintain and improve the function of these drains. In Michigan, there are nearly 90,000 miles of drains across the state, almost three time more than natural rivers and streams. Public drains can act as conduits for nutrients and sediment which impact water quality. Conservation practices that retain soil within fields, and out of public drains, provide a cost savings to county drain commissioners through reduced future maintenance costs. A 2014 study by Spicer Group Engineering found that a 10-foot buffer provided optimized economic benefit to drains at a net benefit of \$100 to \$200 per acre of buffer maintained.<sup>1</sup> In 2014, several partners explored the ability of utilizing the Michigan Drain Code and working with drain commissioners to better recognize and incentivize the role of Best Management Practices through landowner drain assessments with a pilot project in Michigan's Van Buren County. The pilot was a success in many regards but did not provide a scalable model.

There were two primary adaptations in the project from initial project goals, being the lack of need for additional financial tools or funds for county drain officials and the availability of existing contractors to provide the economies of scale originally envisioned for the Management Company. Access to additional or low-cost capital did not prove to be a barrier for drain commissioners to support additional conservation practices.

### **4. Project Methods**

An innovation central to the project was the creation, use, and expansion of performance drain assessments by public drainage officials to recognize and incentivize the installation of additional conservation practices. This required legal analysis and review, engineering modeling, literature reviews, and an iterative collaborate dialogue among the project team and their represented interests (farmers, conservation, county government). This process led to an evaluation of 40 potential Best Management Practices. Vegetative buffers were selected for initial piloting as it's a practice that is a.) effective at trapping sediment, b.) provides water quality and habitat benefits, c.) beneficial to farm operations, d.) an understood and accepted practice among parties (no additional education necessary), and e.) can be easily monitored and verified for the duration of the drain bonding period and landowner contract (10-15 years). Although there was strong interest for including cover crops and other in-field management practices, uncertainty of long-term adoption and year-to-year variability created additional challenges and were therefore not included in the pilots. A manuscript describing how the vegetative buffer coefficient was determined is in draft to be submitted to the American Journal of Agricultural Science (expected submission early 2023) that summarizes. Another important aspect of the project's methodology was active farmer engagement throughout the project, led by the Michigan Farm Bureau in conjunction with their County Farm Bureau Leaders. This ensured that farmers were aware of the program and how it could

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<sup>1</sup> [https://www.saginawbaywin.org/uploads/Kawkawlin\\_River\\_Filter\\_Strip\\_Analysis.pdf](https://www.saginawbaywin.org/uploads/Kawkawlin_River_Filter_Strip_Analysis.pdf)

be beneficial for their operations. In addition to educational meetings at County Farm Bureau meetings, drain commissioners are legally required to offer various public hearings for landowners in respective drains. The D.I.T.C.H. team jointly presented the project at these meetings, addressing landowner questions and initiating enrollment into pilots.

## 5. Project Results

Deliverables against project objectives are described below.

**Objective 1.** *Create drain coefficients for performance drain assessments and assist county drain commissioners to pilot their use in property drain assessments rolls.*

Spicer Group Engineering created a buffer strip drain coefficient that can be easily inserted to drainage assessment calculations and into the popular municipal tax and data management software program [BS&A](#). Spicer Group has a draft manuscript outlining the coefficient development that will be submitted to the American Journal of Agricultural Sciences, outlined below as Equation 1.

*Equation 1 Buffer Coefficient for Drain Assessments*

$$P_R = \left( \left( 0.5 * P_T * \left( \frac{(B_W * B_L)}{43,560} + (0.0428 \ln(B_W) + 0.5963) * \left( A_P - \frac{(B_W * B_L)}{43,560} \right) \right) \right) + \left( 0.25 * \left( \frac{0.2(B_W * B_L)}{43,560 * A_P} \right) + 0.25 V_R \right) * (1.1 DD_{PR} + 0.45) \right)$$

Sediment Reduction Terms
Rate Reduction Terms
District Adjustment

$$C_R = C * (1 - P_R)$$

C = Base Agriculture Land Use Coefficient

C<sub>R</sub> = Reduced Land Use Coefficient

P<sub>R</sub> = Percent Reduction of Land Use Coefficient (%)

V<sub>R</sub> = Volume Reduction Terms

DD<sub>PR</sub> = Drainage District Percent Residential (%)

B<sub>W</sub> = Buffer Strip Width (ft)

B<sub>L</sub> = Buffer Strip Length (ft)

A<sub>P</sub> = Parcel's assessable area in Drainage District (Ac)

P<sub>T</sub> = Percent of Parcel Treated (%)

Tutorials on how to utilize the coefficient and modify in the BS&A program can be found at the links below:

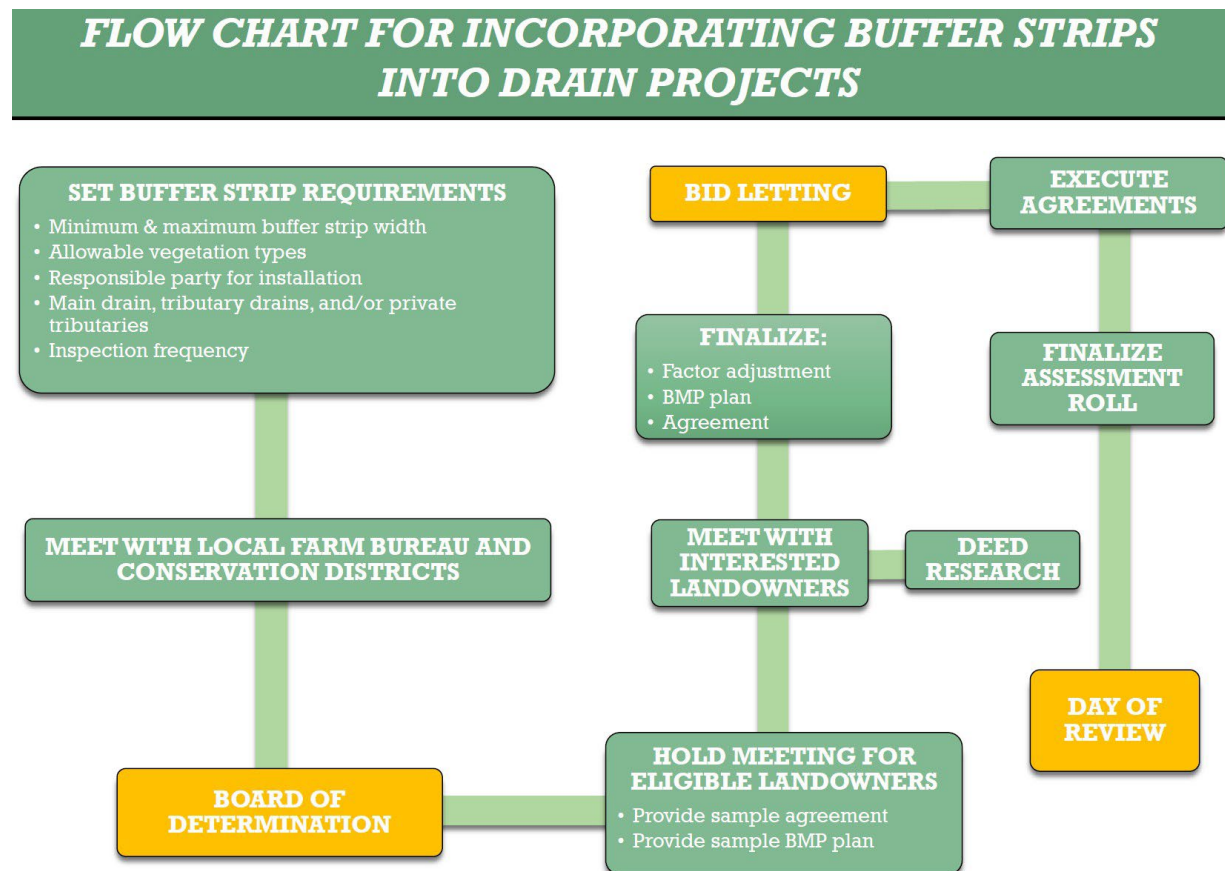
- Agricultural Buffer Strip Drain Assessment Adjustment Calculator:  
<https://youtu.be/tvA7TGSqPx0>
- How to Apply a Reduced Land Use Coefficient to an Assessment Roll in BS&A:  
<https://youtu.be/nj4TYcJGXX8>

**Objective 2.** Outreach materials and Frequently Asked Questions for use by drain professionals for use with landowners.

A series of Frequently Asked Questions, or FAQs, were developed for each of the prospective pilot drainage districts that addressed program requirements, potential benefits, and information on how to learn more or enroll in the program. These were tailored to the specific program requirements established by each county drain or water resources commissioner. An example of one of the FAQs is included as Attachment A. The FAQs were distributed in mailings and presentation at landowner information hearings, required as part of the approval process for respective drainage projects.

**Objective 3.** Outreach materials and Frequently Asked Questions targeted towards drain professionals and drain commissioners.

Outreach to drain professionals occurred primarily through the workshops described in Objective 7, after the initial pilot was completed. The chart below was shared to outline the various steps of incorporating a D.I.T.C.H. buffer project into a drain project. The orange boxes indicate steps that drain commissioners are required by law to perform for any drainage improvement project under the Michigan Drain Code.



**Objective 4.** *Presentations to at least two drain commissions and municipalities.*

The D.I.T.C.H. project was presented to staff from 31 Michigan county drain/water commission offices over a series of workshops in December 2020. A copy of the workshop can be found [here](https://drive.google.com/file/d/1UaTvuHzceHEOKhCI5quXVhrOkT2mH3lu/view) (https://drive.google.com/file/d/1UaTvuHzceHEOKhCI5quXVhrOkT2mH3lu/view). The workshops are described in greater detail under Objective 7.

**Objective 5.** *Creation of a Drain Management Company.*

An adaptation in the project was the recognition that a 'Management Company' was not necessary to deliver scalable conservation practice implementation with county drain and water officials. The Management Company was envisioned to provide economies of scale in the implementation, monitoring, and maintenance of contracted conservation practices as well as in the procurement and management of capital. As additional capital was found to be unnecessary (see Objective 8) this function was found unnecessary. The Management Company was also intended to remove barriers to participation for county drain/water offices that are understaffed. Staff capacity was not as significant of a barrier as initially assumed, as there is an existing ecosystem of consulting engineering, legal and construction professionals that provide this capacity.

**Objective 6.** *Protocol landowner contracts for program participation.*

Project team member Fahey Schultz Burzych Rhodes PLC drafted a legal contract for county drain or water resources commissions to use with participating landowners, a template of which can be found as Attachment B to this report.

**Objective 7.** *Outreach to drain professionals: the project team will present the project at least one Michigan Association of County Drain Commissioners conference, submit a publication to the MACDC's publication 'Pipeline', and other outreach materials to target drain professionals in other Midwestern states.*

In 2019, workshops were held December 9<sup>th</sup> in West Olive, MI; December 11<sup>th</sup> in Frankenmuth, MI; and December 12<sup>th</sup> in Dundee, MI. Collectively, the workshops had 127 participants composed of drain commissioners and staff from their offices, Michigan Department of Agriculture and Rural Development employees, contract engineers, and other consultants that work with county drain offices. In total, representation from 31 counties participated in the workshops, representing approximately 70% of counties with active drain offices and significant agricultural lands. Workshops provided an overview of the D.I.T.C.H. program, partners involved, demonstrations of engineering tools created and how they can be accessed, legal Q&A, and the perspective of the drain commissioners that participated in the initial pilot. Six additional counties reached out for assistance with implementing DITCH in their respective counties in 2020 following the workshops, with 8 additional counties highly supportive of the program and 12 that expressed some level of interest in a pilot. Adoption and implementation would be the county offering DITCH on petitioned drain projects, which

could range from 1-10 projects per county. The pandemic, work related closures, staffing and supply chain challenges, and overall uncertainty have limited additional pilots to date.

Two articles describing the project and pilot successes were published in the Michigan Association of County Drain Commissioner (MACDC)'s quarterly publication [Pipeline](#). The articles appeared in the Winter and Spring 2020 editions (links provided in section 6). Additional outreach at MACDC conferences did not occur, primarily due to Covid related closures and lack of additional updates beyond the December 2020 regional workshops that were attended by most of the active county drain or water resource commissioners in the state. The project team intends to present at a future winter MACDC conference.

In August 2019 the project team was invited by the Michigan Department of Agriculture and Rural Development to present on the project for consideration as part of the State of Michigan's Domestic Action Plan for Western Lake Erie. The Department indicated that it would make D.I.T.C.H. a requirement for inter-county drain projects within the Michigan portion of the Western Lake Erie Basin going forward, with one large drain improvement project for the Big Swan Creek Drainage District identified as initial opportunity, a large drain covering three Michigan counties (Wayne, Washtenaw, and Monroe). The pilot is still in development as the larger project continues to undergo various permitting and approval processes.

Outside of Michigan, D.I.T.C.H. was presented to various drain officials or engineers in Indiana, Illinois, and Iowa. An engineering feasibility study was completed in Indiana (supported outside of the D.I.T.C.H. project), analyzing potential cost-savings from reduced sedimentation across several regions in the state. Favorable results would make the case for D.I.T.C.H. After recruiting participation from 10 appreciative County Surveyors (responsible for county drain management), the assessment found limited additional benefit from increasing sedimentation reducing practices in row-crop dominant drains. Underlying geology was found to be the primary determinant of drainage maintenance and improvement needs, as well as observed use of conservation practices. Water storage benefits to reduce runoff velocity and volume was found to be a primary need. It was beyond the scope of the project to assess water retention benefits of soil health practices relative to surface water storage features, but the firm and local partners are interested in further exploring opportunities for country drainage management to incentivize conservation. The Nature Conservancy is currently pursuing a pilot in Illinois with non-USDA funds as well, but a location has not yet been selected.

**Objective 8.** *Financial analyses to determine investment need and worthiness of approach, and if appropriate an investment prospectus to secure private capital.*

In the development of the pilots, it was determined that non-traditional financing would not be needed to advance the project as County Drain and Water Resource Commissions have access to low-cost capital such as municipal bonds. There is sufficient flexibility in the Michigan Drain Code where traditional finance can be utilized. The larger barriers to utilizing modified drainage assessments for conservation Best Management Practice implementation are demonstrated economic benefits (which the coefficient developed in Objective 1 provided)



and social capital with local landowners (the project also successfully demonstrated).

### **Pilot Results**

Four counties implemented D.I.T.C.H. vegetative buffers during the project period, with several additional counties in various stages of offerings. Summaries of the pilots are presented in the table in under Section 7, Project Impacts. Circumstances of the buffers under contract in the Deacon-Stone pilot illustrate how landowners and farmers viewed the program. Of the six contracts, five represent buffers that would otherwise not exist in the absence of the pilot. The two contracts in Gratiot County were on properties with recently expired Conservation Reserve Program contracts and whose landowners intended to bring the land back into production. One of the Saginaw contracts was for an existing buffer; the other three properties are directly adjacent to the drain and in the past 1-3 years had a buffer in place that had since been converted. In total, the pilot has ensured 5 buffers that would otherwise not exist. Enrolled parcels ranged from 7 to 78 acres and realized cost-savings of \$192.24 to \$2,667.47 per parcel. Mean landowner cost-savings on a per-acre of buffer contracted were \$1,704.74 (\$778.27-\$3,575.83). In total, 4.64 acres of perennial buffers will be maintained through pilot contracts. The Deacon-Stone drainage district overall encompasses 77 parcels, 1,534 acres, and 3.45 miles of drain.



*A Buffer from the Deacon-Stone Pilot. Saginaw Co, Michigan. Photo credit Steve Roznowski*



## 6. Project Outputs

Article in *Michigan Farm News*, an official publication of the Michigan Farm Bureau (2/28/20):  
<https://www.michiganfarmnews.com/-implement-michigan-s-drain-infrastructure-transactions-for-clean-h2o-michigan-s-drain-buffer-strip-program-project>

Two articles in the Michigan Association of County Drain Commissioners quarterly publication *Pipeline*:

- Spring 2020 Vol 29(1), p.11-14, *MICHIGAN'S DRAIN BUFFER STRIP PROGRAM PROJECT*  
[https://macdc.us/wp-content/uploads/2020/07/2020\\_1st%20Quarter\\_Pipeline\\_Low%20Res.pdf](https://macdc.us/wp-content/uploads/2020/07/2020_1st%20Quarter_Pipeline_Low%20Res.pdf)
- Winter 2020 Vol 29(4): p. 7-8, *DRAIN COMMISSIONERS BEGIN NEXT STEPS OF PROVIDING INCENTIVES FOR BUFFER STRIPS ALONG DRAINS*  
[https://macdc.us/wp-content/uploads/2021/01/4Q-MACDC-Pipeline\\_v2\\_LowRes.pdf](https://macdc.us/wp-content/uploads/2021/01/4Q-MACDC-Pipeline_v2_LowRes.pdf)

Podcase episode on “In the Weeds”, a production of the Michigan State University Extension Field Crops Team, *Clean and Clear: Partnership with local drain officials*:

<https://open.spotify.com/episode/77gyKrAsR3ONTwMHxt2Q0d>

Farmer outreach over the course of the project that a Michigan Farm Bureau team member spoke at:

- 15 County Farm Bureau events – approximately 375 attendees in total
- 6 regional events for farmers- 450 farmers in attendance
- 4 Drain Commissioner events for landowners in their drainage districts- 100 landowners/farmers in attendance

Trainings and Outreach Events for Drain Commissioners

- December 9<sup>th</sup>, 2019; West Olive, Michigan
- December 11<sup>th</sup>, 2019; Frankenmuth, Michigan
- December 12<sup>th</sup>, 2019; Dundee, MI

Collectively, the workshops had 127 participants composed of drain commissioners and staff from their offices, Michigan Department of Agriculture and Rural Development employees, contract engineers, and other consultants that work with county drain offices. In total, representation from 31 counties participated in the workshops, representing approximately 70% of counties with active drain offices and significant agricultural lands. Workshops provided an overview of the D.I.T.C.H. program, partners involved, demonstrations of engineering tools created and how they can be accessed, legal Q&A, and the perspective of the drain commissioner that participated in the pilot project.

Other Outreach

- Michigan Association of Conservation Districts Fall Conference October 30, 2019- Shanty Creek Resort, Bellaire, MI – 75 conservation district professionals.

## 7. Project Impacts

The D.I.T.C.H. concept for vegetative buffer strips has been successfully implemented in 4 Michigan counties as of October 2022, with additional pilots in various stages of implementation. Impacts for the four successfully implemented pilots are summarized in the table below.

Michigan County	Drain District	Parcels Enrolled	Parcel Total Acres	Buffer Width	Buffer Acres	Landowner Assessment Reduction
Saginaw	Deacon-Stone Drain	4	118.5	10'	2.31	16.5%
Gratiot	Deacon-Stone Drain	2	91.8	15'	2.33	24.1%
Monroe	Plum Creek	20	900.0	15'	14.00	24.0%
St. Clair	Holland	2	41.8	15'	0.53	
St. Clair	State Road	1	22.8	15'	0.36	
<b>Totals</b>		<b>29</b>	<b>1174.8</b>		<b>19.5</b>	

### List of Attachments

- Attachment A: Landowner FAQ
- Attachment B: Template Landowner Contract

## **Attachment A: Landowner FAQ**

# FAQs

Brian Wendling  
Saginaw County  
Public Works Commissioner



## BMP ASSESSMENT FACTORS FOR DRAIN PROJECTS DEACON AND STONE INTERCOUNTY DRAIN

*This form is for informational purposes only and not for the purpose of providing legal advice.  
You should contact your attorney to obtain advice with respect to any particular issue or problem.*

### ***Why is the Public Works Commissioner asking property owners to implement BMPs?***

Certain BMPs (like filter strips) within the Drainage District can reduce future maintenance of a drain, making drain projects and maintenance less expensive. The Public Works Commissioner is part of a pilot project to provide incentives to property owners who implement these types of BMPs. The Nature Conservancy, Michigan Farm Bureau, and the Saginaw County Public Works Commissioner received a USDA NRCS Conservation Innovation Grant for this pilot project, with additional support from the Cook Family Foundation.

### ***What are the goals of the grant?***

The project partners are seeking to increase the use of BMPs by property owners that will reduce sediment into the drains and improve water quality. The grant will assist with the costs of developing the program in Saginaw County so that certain agricultural BMPs within the Drainage District can be taken into consideration when assessing for drain projects.

### ***What is a Best Management Practice (BMP)?***

A best management practice (BMP) is a practice that is determined to be an effective means of preventing or reducing pollution, soil erosion, and flooding. BMPs can include filter strips, drainage tile outlet structures, erosion control practices, and grassed waterways. For this project, the eligible agricultural BMP is limited to filter strips.

### ***Why would a property owner install a filter strip?***

Property owners who install a filter strip on qualifying agricultural land may enter into an agreement with the Drainage District to receive a reduction factor when apportionments are determined, reducing the property's drain assessments.

### ***How do I qualify?***

You must own land classified by County Equalization as agricultural land in a Drainage District with a petitioned drain project and be willing to implement a filter strip plan for your property to qualify for the BMP reduction factor.

### ***What if I already have qualified filter strips on my property?***

Property owners who already have qualified filter strips in place on their agricultural land may also qualify and benefit from the BMP reduction factor.

### ***How do I receive the BMP reduction factor?***

Property owners must enter into an agreement with the Drainage District to implement and maintain an agreed upon filter strip plan. When assessments are determined, the Public Works Commissioner will use a BMP factor to reduce the assessment that will appear on your winter taxes where agreements are in place.

### ***How long will I have to maintain the filter strips?***

After entering into an agreement with the Drainage District, the filter strips must be maintained by the property owner for the length of the assessment for the petitioned drain project.

### ***What happens if I do not maintain the filter strips?***

The Drainage District will issue a notice if the property owner does not properly maintain the filter strip. If the proper maintenance does not take place, the Drainage District may require the property owner to pay the amount of any previous reductions in assessments for the project. Also, the BMP reduction factor will be removed for the remainder of the project's assessments.

### ***Do I qualify for the BMP reduction factor if filter strips on my property are enrolled in another program?***

The BMP factor will still apply even when the filter strip is enrolled in other programs. Properties in the Deacon and Stone Intercounty Drainage District are eligible for additional cost share. For more information on cost share programs such as the Saginaw Bay Watershed Pay-for Performance (PfP) Project ([nature.org/SaginawbayPFP](http://nature.org/SaginawbayPFP)) or USDA NRCS programs, please contact Kurt Wolf at [kurt.wolf@macd.org](mailto:kurt.wolf@macd.org).

### ***How can I get more information?***

Visit the Saginaw County Department of Public Works website at <http://www.saginawcounty.com/PublicWorks/Default.aspx> or call (989) 790-5258 for more information.

**Brian Wendling**

**Attachment B: Template Landowner Contract**

\_\_\_\_\_DRAIN

**BEST MANAGEMENT PRACTICES AGREEMENT**

**THIS AGREEMENT**, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, \_\_\_\_\_County Drain Commissioner, whose address is \_\_\_\_\_ (“Drain Commissioner”), on behalf of the \_\_\_\_\_ Drain Drainage District (“Drainage District”), and OWNER and OWNER, as DESIGNATION, whose address is ADDRESS (“Landowners”), as owners of land described in *Exhibit A* attached hereto (“Property”).

**WHEREAS**, Landowners are the owners of the Property described in *Exhibit A*; and

**WHEREAS**, the Property is located within the Drainage District; and

**WHEREAS**, there is a current petitioned project (“Project”) for maintenance and improvements to the Plum Creek Drain (“Drain”); and

**WHEREAS**, it is anticipated that assessments to pay for the Project will be levied to the Drainage District over a period of \_\_\_\_years; and

**WHEREAS**, the implementation of best management practices (“BMPs”) on certain properties within the Drainage District will benefit the Drain by reducing soil erosion and sedimentation, reducing run-off rates, and/or increasing storage within the Drainage District; and

**WHEREAS**, the benefits provided to the Drain as a result of the BMPs will assist in the reduction of future costs of maintenance and operation of the Drain; and

**WHEREAS**, Landowners have agreed to implement a plan for BMPs on the Property (“BMP Plan”), attached as *Exhibit B*, for the benefit of the Drain and Drainage District; and

**WHEREAS**, Landowners have agreed to implement and maintain the BMPs on the Property in accordance with the Drainage District’s requirements, as provided in the BMP Plan; and

**WHEREAS**, Landowners have been advised, understand, and agree to assume the total cost of implementing the BMP Plan, including engineering expenses, inspection expenses, legal expenses, and administrative expenses, and other expenses associated with this Agreement; and



**WHEREAS**, Landowners will receive a factor in the apportionment process for the Project as a result of entering this Agreement to implement the BMP Plan on the Property and to provide a benefit to the Drain and Drainage District.

**NOW, THEREFORE**, in consideration of the foregoing promises, covenants of each, and the following terms and conditions, the parties hereto agree as follows:

Landowners' Responsibilities and Rights

1. Landowners shall implement the BMP Plan on the Property and it shall be inspected and approved by the Drainage District by no later than the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.
2. Landowners shall implement and maintain the BMPs as depicted in the BMP Plan and in accordance with the specific maintenance requirements outlined in this Agreement for a period of \_\_\_\_\_ years from the effective date of this Agreement.
3. Landowners shall ensure that any tenant on the Property is aware and complies with the requirements of this Agreement and its specific terms regarding the BMP Plan.
4. Landowners shall be responsible for all costs related to implementation and maintenance of the BMP Plan on the Property, including but not limited to engineering costs, inspection costs, legal costs, administrative costs, and other related costs associated with this Agreement.
5. Landowners shall secure all necessary permits or authorizations as may be required by local, state, or federal law for implementation and maintenance of the BMP Plan on the Property and shall provide copies to the Drain Commissioner. Landowners shall also provide copies of all correspondence and reports involving any governmental agency with respect to the BMPs implemented or to be implemented on the Property.
6. Landowners shall be responsible for all costs related to the enforcement of this Agreement, including reasonable attorney's fees.

Drain Commissioner's Responsibilities and Rights

7. The Drainage District agrees that a factor shall be utilized for the Property for the Project, taking into consideration the benefits to the Drain attributable to the BMPs implemented on the Property, subject to the provisions of the Drain Code of 1956, as amended. It is estimated that the factor for the Property will be \_\_\_\_\_.
8. The Drain Commissioner shall set and establish the factor to be utilized for the Property for the Project. Landowners acknowledge and agree that the accompanying specific dollar amount resulting from the reduced apportionment will not be known until such time as the advertisement and proposal of the Project has occurred and the bids are received.

9. The Drainage District shall inspect the Property at reasonable intervals to ensure compliance with this Agreement and the BMP Plan, but it is expressly understood and agreed that the Drainage District and its representatives are under no obligation to maintain or repair the BMPs installed on the Property pursuant to this Agreement.

#### Enforcement of this Agreement

10. Landowners hereby grant permission to the Drainage District, its authorized agents, and employees to enter the Property at reasonable times and to inspect the BMPs on the Property to ensure compliance with this Agreement and the BMP Plan. In such case where the BMPs to be inspected are located on the Property outside of an existing drain easement, then the Drainage District shall provide Landowners written notice prior to entry.
11. It is acknowledged and agreed that the Drainage District shall have sole discretion in determining whether the Landowners' operation and maintenance of the BMPs are compliant with the BMP Plan. Failure to comply shall be considered a violation of the BMP Plan. In the event of a violation of the BMP Plan, the Drainage District shall provide written notice to Landowners of the specific violation. Landowners shall then have \_days from the date of notice to remedy the violation.
12. If Landowners fail to operate and maintain the BMPs as depicted in the BMP Plan resulting in a violation and the Landowners fail to remedy the violation in accordance with Paragraph 11, the Drainage District or its representatives may require Landowners to pay any previous reductions in assessments for the Project based on the factor utilized pursuant to Paragraph 7 of this Agreement. The reduction for the factor will be added as a supplemental assessment to the Property's apportionment of benefit for the remainder of assessments for the Project until the BMP is remedied consistent with the BMP Plan.
13. If the Drainage District requires Landowners to pay any previous reductions in assessments for the Project following a breach of this Agreement, the amount of reductions to be repaid will be calculated as the total or a portion thereof received during the period ending on the date of the most recent satisfactory Drainage District inspection, and beginning on the date no earlier than three (3) years prior to that most recent satisfactory inspection date.

#### Miscellaneous

14. Modifications, amendments, or waivers of any provision of the Agreement may be made only by the written mutual consent of the parties.
15. Once executed, this Agreement shall be recorded with the Monroe County Register of Deeds.
16. This Agreement shall become effective upon its execution by Landowners and the Drain Commissioner and shall be binding upon the successors and assigns of each party.

17. If Landowners decide to remove BMPs after the term of the Agreement, the Landowners shall be required to abide by all local, state, and federal laws and regulations applicable to the Property. Landowners shall be responsible for costs associated with removal of BMPs.
18. Should Landowners owe any costs under this Agreement, each landowner will be jointly and severally liable for all costs owed.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed by the duly authorized officers as of the day and year first above written.

**PLUM CREEK DRAIN DRAINAGE DISTRICT**

Date: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_ County Drain Commissioner

STATE OF MICHIGAN                    )  
  )ss  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, a Notary Public in and for said County, personally appeared \_\_\_\_\_, on behalf of the \_\_\_\_\_ Creek Drain Drainage District, to me known to be the person described in and who executed the foregoing instrument and acknowledged the same to be his free act and deed.

\_\_\_\_\_

\_\_\_\_\_ Notary Public

State of Michigan, County of \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

Acting in the County of \_\_\_\_\_

**LANDOWNERS**

Date: \_\_\_\_\_

By: OWNER \_\_\_\_\_

STATE OF MICHIGAN                    )  
  )ss  
COUNTY OF \_\_\_\_\_)

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, a Notary Public in and for said County, personally appeared OWNER, to me known to be the person described in and who executed the foregoing instrument and acknowledged the same to be his/her free act and deed.

\_\_\_\_\_  
Notary Public  
State of Michigan, County of \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
Acting in the County of \_\_\_\_\_

Date: \_\_\_\_\_  
By: OWNER

By: OWNER

STATE OF MICHIGAN )  
 )ss  
COUNTY OF \_\_\_\_\_)

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, a Notary Public in and for said County, personally appeared OWNER, to me known to be the person described in and who executed the foregoing instrument and acknowledged the same to be his/her free act and deed.

\_\_\_\_\_  
State of Michigan, County of \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
Acting in the County of \_\_\_\_\_

**Drafted By:**

Jacob C. Chappelle (P84740)  
Fahey Schultz Burzych Rhodes PLC  
4151 Okemos Road  
Okemos, MI 48864  
(517) 381-0100

**When Recorded Return To:**

\_\_\_\_\_(name of Drain Comm.)  
\_\_\_\_\_  
County Drain Commissioner  
\_\_\_\_\_  
\_\_\_\_\_(address line 1)  
\_\_\_\_\_(address line 2)  
\_\_\_\_\_(phone number)

## **EXHIBIT A**

[Insert Property Description including map depicting property, etc.]



## **EXHIBIT B**

[Insert Specific Property BMP Plan.]