

# Deep River Watershed Initiative Cost-Share Program

## **Submitted:**

Northwestern Indiana Regional Planning Commission- April 30, 2018

### **1. Project's executive document summary number:**

C9-97548213

### **2. Watershed management plan being implemented with cost-share funds:**

Deep River-Portage Burns Waterway

### **3. Watershed & subwatersheds targeted by cost-share program:**

Deep River-Portage Burns Waterway Watershed, HUC 0404000105

- Headwaters Main Beaver Dam Ditch Subwatershed, HUC 040400010501
- Main Beaver Dam Ditch-Deep River Subwatershed, HUC 040400010502
- Headwaters Turkey Creek Subwatershed, HUC 040400010503
- Deer Creek-Deep River Subwatershed, HUC 040400010504
- City of Merrillville-Turkey Creek Subwatershed, HUC 040400010505
- Duck Creek Subwatershed, HUC 040400010506
- Lake George-Deep River Subwatershed, HUC 040400010507
- Little Calumet River-Deep River Subwatershed, HUC 040400010508
- Willow Creek-Burns Ditch Subwatershed, HUC 040400010509

### **4. Critical Areas & Priority Preservation (High Quality) Areas for Implementation:**

The Deep River-Portage Burns Waterway Watershed Management Plan identifies geographic locations considered to be "critical areas" or "priority areas" for implementing projects/practices that improve or protect water quality and aquatic habitats in Sections 9 (pages 319-326) and 10 (pages 331-332) respectively. Best management practices (BMPs) that are installed and financially supported with Section 319 Cost-Share Program funding must occur in a critical or priority preservation area to be eligible.

Catchment areas that have been identified as Tier 1 (highest priority) in the Deep River-Portage Burns Waterway Watershed Management Plan include catchments 3, 21, 24, 25, 26, 27, and 36 (Figure 1). Tier 2-4 catchment areas are not currently eligible for Section 319 Cost-Share Program funding at this time. Alternative funding sources should be considered for projects in these areas.

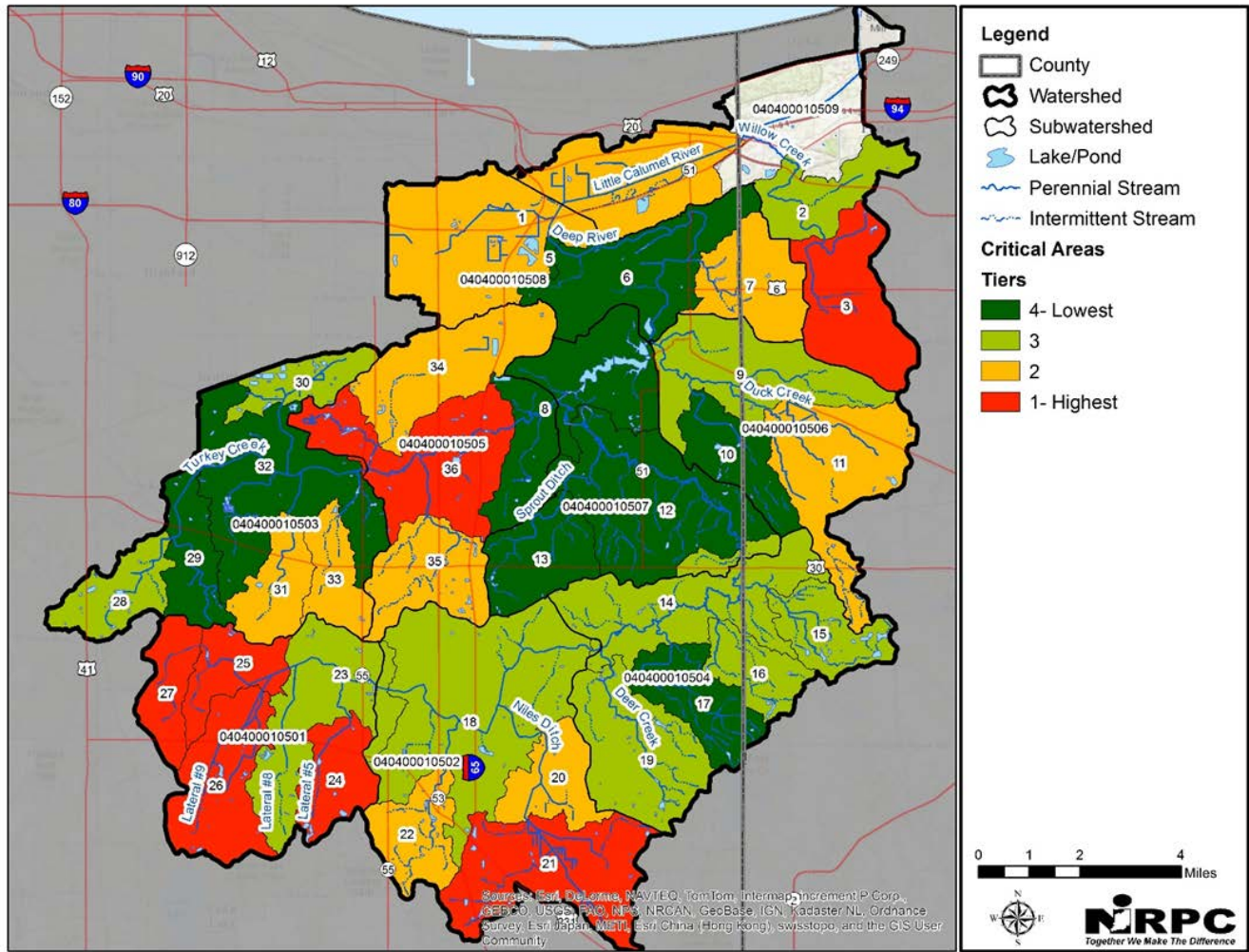


Figure 1 Critical areas

Table 1 provides a summary of the water quality and physical habitat problems that have been identified within each Tier 1 critical area.

Table 1 Tier 1 critical area water quality and habitat problems

Catchment Area	<i>E. coli</i>	Dissolved Oxygen	Nutrients	Sediment	Ammonia Toxicity	Physical Habitat
3	X		X	X		X
21	X	X	X	X	X	X
24	X	X	X	X	X	X
25	X	X	X	X	X	X
26	X	X	X	X		X
27	X	X	X	X		X
36	X		X	X		X

Tables 3-7 provide a summary of the human activities, sources and site evidence tied to each water quality and/or habitat problem in the Tier 1 critical areas.

Table 2 Human activities, sources and site evidence tied to dissolved oxygen problems in tier 1 critical areas

Catchment Area	Human Activity			Source						Site Evidence					
	Agriculture	Urbanization	Channel Alteration	Impoundments	Septic Systems	Point Sources	Agricultural & Urban Runoff	Devegetated Riparian Areas	Channel Alteration	High Plant Abundance	Slow Moving Water	Organic Wastes	Turbidity	Color	Embedded Substrate
21	X		X		X		X	X	X	X	X	X	X	X	X
24		X	X	X		X	X		X	X	X		X	X	X
25	X	X	X		X		X	X	X	X	X		X	X	X
26	X	X	X		X		X		X	X	X		X	X	X
27	X	X	X		X		X	X	X	X	X		X	X	X

Table 3 Human activities, sources and site evidence tied to nutrient problems in tier 1 critical areas

Catchment Area	Human Activity			Source						Site Evidence		
	Agriculture	Urbanization	Channel Alteration	Waste Water Treatment Plants/CSO/SSO	Animal Feeding Operations	Agricultural & Urban Runoff	Pasture Runoff	Septic Systems	Proliferation of Filamentous or Algae Mats	Phytoplankton Blooms (Green Water)	High Plant Abundance	
3	X	X	X			X		X	X			
21	X		X		X	X	X	X	X	X	X	
24	X	X	X	X		X		X	X	X	X	
25	X	X	X			X	X	X	X	X	X	
26	X	X	X			X	X	X	X	X	X	
27		X	X			X		X	X		X	
36	X	X	X	X		X		X			X	

Table 4 Human activities, sources and site evidence tied to sediment problems in tier 1 critical areas

Catchment Area	Human Activity			Source						Site Evidence		
	Land Cover Alteration	Riparian Alteration	Channel Alteration	Autumn Plowing	Road Maintenance	Channel Modification	Eroding Streambanks	Impoundments	Impervious Surfaces	Turbid Water	Deposited or Embedded Substrate	Slow Moving Water
3	X	X	X		X	X	X		X	X		X
21	X	X	X	X	X	X	X			X	X	X
24	X	X	X		X	X	X	X	X	X	X	X
25	X	X	X	X	X	X				X	X	X
26	X	X	X	X	X	X				X	X	X
27	X	X	X	X	X	X			X	X	X	X
36	X	X	X	X	X	X			X	X	X	X

Table 5 Human activities, sources and site evidence tied to ammonia toxicity problems in tier 1 critical areas

Catchment Area	Human Activity			Source								Site Evidence			
	Agriculture	Urbanization	Channel Alteration	Impoundments	Septic Systems	Point Sources	Agricultural & Urban Runoff (Fertilizer)	Manure Application	Animal Feeding Operations	Devegetated Riparian Areas	High Plant Production	Slow Moving or Stagnant Water	Organic Wastes	Suspended Solids	Alkaline, Anoxic, or Warm Water
21	X		X		X		X	X	X	X	X	X	X	X	X
24		X	X	X		X			X	X	X				X
25	X	X	X		X		X		X	X	X				X

Table 6 Human activities, sources and site evidence tied to physical habitat problems in tier 1 critical areas

Catchment Area	Human Activity		Source						Site Evidence							
	Agriculture	Urbanization	Channelization	Impervious Surfaces	Agricultural Drainage	Devegetated Riparian Areas	Dredging	Burried/ Piped Stream	Concrete or Rip-Rap	Embedded Substrates	Bridge or Culvert	Channelization	Predominance of Runs, Glides, or Pools	Eroded Streambanks	Lack or Alteration of Riparian Vegetation	Lack of Habitat Features
3	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
21	X	X	X		X	X	X			X	X	X	X	X	X	X
24		X	X	X		X	X		X	X	X	X		X	X	
25	X	X	X		X	X	X			X	X	X	X	X	X	
26	X	X	X		X	X	X			X	X	X	X	X	X	
27	X	X	X	X	X	X	X			X	X	X	X	X	X	X
36	X	X	X	X	X	X	X			X	X	X	X	X	X	X

The following areas have been identified as priority preservation areas in this watershed:

- The Hobart Marsh Area
- The Deep River Outstanding River Corridor

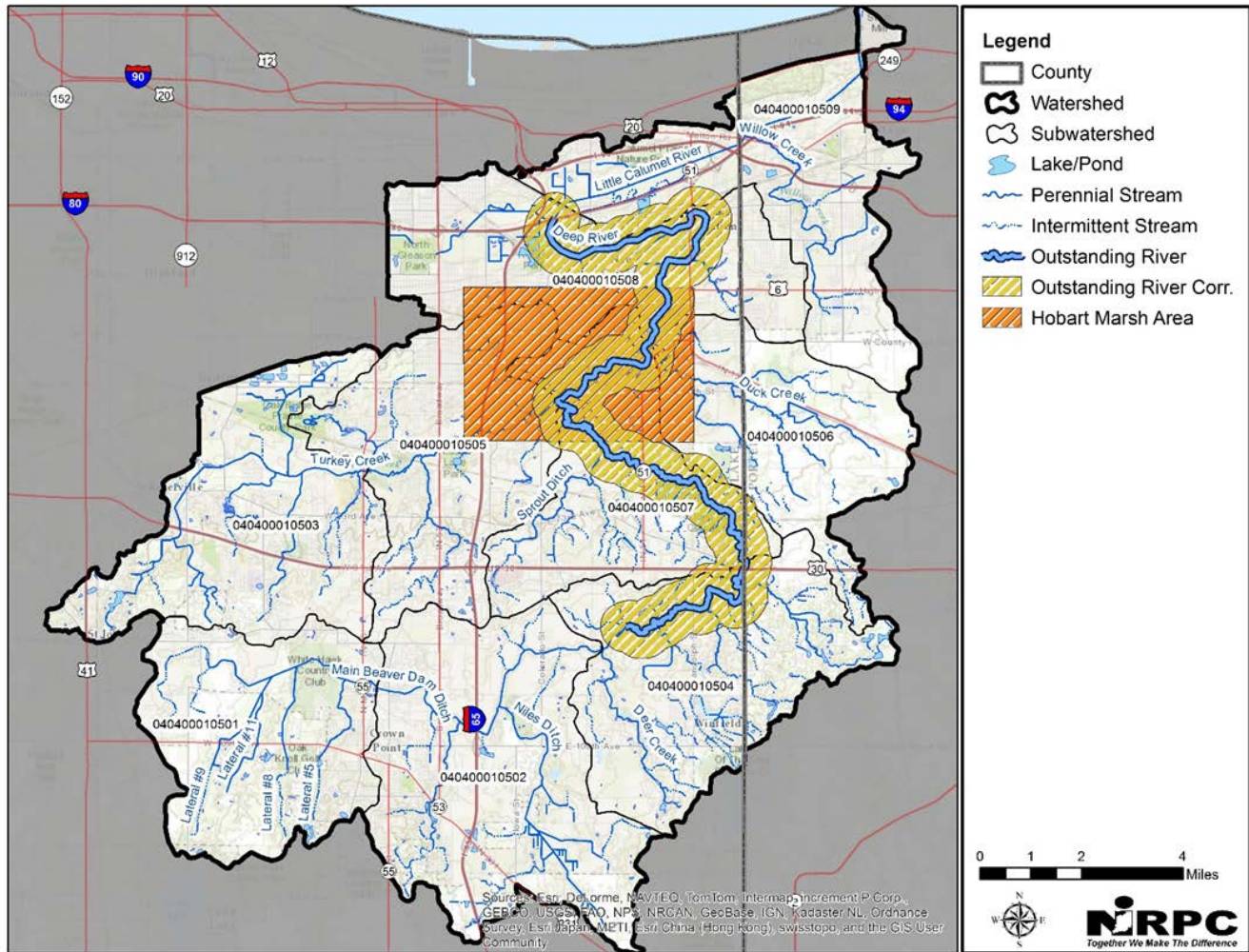


Figure 2 Priority areas

### 5. Decision Making Process for Determining Where BMPs will be targeted in Critical Areas

There is no deadline for application submittal (i.e. open enrollment) during the current round of Section 319 Cost-Share Program funding. However, projects must be completed and all reimbursement paperwork submitted by December 28, 2018. Funding is being made available on a first-come-first-serve basis. Projects can be placed on a waiting list if the applicant wishes for future funding consideration.

Applications received by NIRPC or the NRCS (for projects located on agricultural lands) will be evaluated and approved by a cost-share program subcommittee. A copy of the evaluation sheet that will be used by the subcommittee to review each proposal is included at the end of this document. Following the subcommittee’s review the applicant will be notified of any conditional requirements and/or funding status.

There is no official minimum score required for funding consideration at this time. However, the cost-share program subcommittee will use professional judgement in evaluate projects for effectiveness

and cost-benefit. The steering committee may choose to establish a minimum score threshold for project funding.

**6. Eligible Best Management Practices & Pollutants Addressed under this Cost-Share Program**

Information on the best management practices (BMPs) recommended for critical and priority areas in the watershed are detailed in Section 11 of the Deep River-Portage Burns Waterway Watershed Management Plan. However, due to current grant funding time constraints, a somewhat reduced list of practices is being considered eligible at this time. A summary of currently eligible practices and associated water quality and habitat/hydromodification improvement expected with each is presented in the following two tables.

BMPs must comply with standards and specifications developed by: the Natural Resources Conservation Service (NRCS), such as the NRCS Field Office Technical Guide (FOTG); the Indiana Department of Natural Resources (IDNR); or other recognized standards by IDEM. FOTG code numbers, denoted by (###), are included with BMPs below where an NRCS standard and specifications exist. A Conservation Plan must be in place and followed in all agricultural fields to be eligible for cost-share funds. Since urban BMPs have been a fairly recent priority, a formalized list of standards and specifications does not exist. Standards and specifications recommended by IDEM include the LID Manual for Michigan, City of Philadelphia Storm Water Manual, and IDEM Storm Water Quality Manual. Other standards and specification may be considered but must be pre-approved by IDEM.

*Table 7 Urban area best management practices*

<b>Best Management Practice</b> (FOTG practice code)	<b>N</b>	<b>S</b>	<b>P</b>	<b>H</b>
Bioretention	X	X	X	X
Capture Reuse [rain barrel or cistern]	X	X		X
Constructed Filter	X	X		
Infiltration Practices	X	X	X	X
Low Impact Development (LID) Site Design				
Native Revegetation (Trees, grasses, shrubs)	X	X		X
Pervious Pavement w/ Infiltration	X	X		X
Planter Boxes	X	X		
Riparian Buffer Restoration	X	X		X
Vegetated Filter Strip	X	X		
Vegetated Roof (Green Roof)	X	X		X
Vegetated Swale	X	X		
Water Quality Devices				

N=Nutrients, S=Sediment, P= Pathogens, H=Habitat/Hydromodification

\*See IDEM Section 319 Grant Program Eligible NRCS FOTG Practice (Ver. 2- May 2015) for key requirements

*Table 8 Agricultural area best management practices*

<b>Best Management Practice</b> (FOTG practice code)	<b>N</b>	<b>S</b>	<b>P</b>	<b>H</b>
Comprehensive nutrient management plan (102)*	X			
Conservation cover (327)	X	X	X	X
Cover crop (340)*	X	X		

<b>Best Management Practice (FOTG practice code)</b>	<b>N</b>	<b>S</b>	<b>P</b>	<b>H</b>
Critical area planting (342)	X	X		X
Field border (386)	X	X	X	X
Filter strip (393)	X	X	X	X
Forage & biomass planting (512)	X	X		X
Grade stabilization structure (410)*		X		
Grassed waterway (412)	X	X	X	X
Integrated pest management (595)*	X	X		
Lined Waterway or Outlet (468)*		X		X
Nutrient management (590)*	X	X	X	
Riparian herbaceous cover (391)*	X	X	X	X
Riparian forest cover (390)*	X	X	X	X
Wetland restoration (657)	X	X	X	X
<b>Drainage Water Management</b>	<b>X</b>	<b>X</b>		<b>X</b>
Blind Tile Inlet/Tile Riser Buffer (620)				
Drainage water management (554)				
Open channel, two-stage ditch (582)*				
Saturated Buffer (580*, 587*, & 620*)				
Structure for water control (587)*				
Subsurface drain (606)*				
Underground outlet (620)*				
<b>Alternative Watering System</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Fence (382)*				
Access control (472)*				
Livestock pipeline (516)*				
Pumping plant (533)*				
Watering facility (614)*				
Water well (642)*				
<b>Livestock Exclusion</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Fence (382)*				
Access control (472)*				
Stream Crossing (578)				
<b>Prescribed Grazing</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Fence (382)*				
Prescribed Grazing (528)				

N=Nutrients, S=Sediment, P=Pathogens, H=Habitat/Hydromodification

\*See IDEM Section 319 Grant Program Eligible NRCS FOTG Practice (Ver. 2- May 2015) for key requirements

### **7. Target Audience Covered under this Cost-Share Program**

The target audience includes agricultural/livestock facility owners and operators, municipal and county properties and easements, publicly owned lands, conservation organizations, and business properties within the critical and priority areas for implementation. Home Owner Associations will be considered but additional information will be required as part of the review process. Private residential land owners will also be considered but eligible practices will be restricted to native revegetation and capture reuse (see Urban Area BMPs table).



### **8. Percentage of Cost-Share that will be provided**

Up to 50% of the total cost for practices listed above will be cost-shared. The remaining percentage will be paid by the landowner via cash or in-kind service(s). The cost-share subcommittee may choose to offer the applicant less than 50% if there are insufficient funds in the cost-share program.

### **9. Cost-Share Program Advertisement**

The cost-share program will be advertised via NIRPC, SWCD and municipal websites, local media, partner newsletters, public meetings, workshops, field days, fliers distributed through partners, and word of mouth.

### **10. Cost-Share Program Application Review**

Cost-share applications will be reviewed and approved by a cost-share subcommittee. The cost-share subcommittee will include urban and agricultural interest representatives. The cost-share subcommittee may place conditional requirements on projects for approval. Following approval the applicant will be notified of funding status.

### **11. Criteria for Reviewing Cost-Share Applications**

Each application will be evaluated for eligibility and anticipated pollutant load reduction/habitat improvement effectiveness. Projects must occur within a critical or priority preservation area. Projects that span across the Deep River Conservation Corridor priority preservation area, which was determined by establishing a half-mile buffer along the approximate river centerline, may still be eligible if the applicant can clearly demonstrate that surface runoff flows downslope to Deep River. A copy of the application form and proposal evaluation review sheet are included at the end of this document.

### **12. Responsibility for the Administration Aspects (Paper Work) of the Cost-Share Program**

The Northwestern Indiana Regional Planning Commission will be responsible for administration of the cost-share program.

### **13. Maximum dollar amount a cost-share recipient may receive**

There is no maximum dollar amount that a cost-share recipient can receive. However, a soft-cap of \$75,000 is recommended to applicants considering these funds. Maximum cost-share dollars for each practice or project area will be determined on a case-by-case basis dependent upon available funds, project costs, and estimated load reductions achievable by project implementation.

### **14. Maximum dollar amount on any individual BMP**

There is no maximum dollar amount for an individual best management practice. Maximum cost-share dollars for each practice or project area will be determined on a case-by-case basis dependent upon available funds, project costs, and estimated load reductions achievable by project implementation.

### **15. Field equipment cost-share**

Cost-share is available for field equipment being modified to be used in conservation farming and/or cover crop application.

**16. Best management practice installation review and approval according to recognized standards:**

Best management practices will be reviewed and approved by NRCS representatives and/or SWCD or ISDA representatives or Technical Service Provider (TSP) or US Forest Service representative or certified arborist/forester or municipal technical staff, contractor, or project designer.

**17. Permitting associated with best management practice installation**

Applicants will be responsible for obtaining and paying for any necessary permits for BMP installation.

**18. Geolocation of BMPs Installed**

Applicants will be responsible for geolocating or providing a map with sufficient detail (ex. Google map with aerial imagery) to determine the location of the BMPs installed under this cost-share program. NIRPC can assist upon owner request. NIRPC will be responsible for location tracking all BMPs installed under this cost-share program.

**19. Models used to estimate the pollutant load reductions from BMPs installed**

STEPL and the Region 5 will be the primary models used to estimate pollutant load reductions. Other models may be considered based on approval from IDEM.

**20. Best management practice maintenance and responsibility**

Applicants will be responsible for maintaining all best management practices. All vegetative and land management practices must be maintained for a minimum of five years with the exception of cover crops (annual practice). All structural practices must be maintained for a minimum of 10 years.

**Project Contact Information**

Joe Exl

Northwestern Indiana Regional Planning Commission

6100 Southport Road, Portage, IN 46368

[jexl@nirpc.org](mailto:jexl@nirpc.org) (219) 763-6060

**Deep River Watershed Initiative  
319 Cost-Share Program Application Form**

**Applicant Information**

Applicant:	Project Contact:
E-mail:	Phone:
Address:	
City, State:	Zip:
Landowner Name:	
Address:	
City, State:	Zip:

**Project Information**

Land use of contributing area draining to project site (place "X" next to all that apply):  
 Commercial\_\_\_ Industrial\_\_\_ Institutional\_\_\_ Transportation\_\_\_ Agricultural\_\_\_  
 Residential\_\_\_ Vacant\_\_\_ Open Space\_\_\_

Problem(s) to be addressed by Project (place "X" next to all that apply):  
 Nutrients\_\_\_ Sediment\_\_\_ Dissolved Oxygen\_\_\_ E. coli\_\_\_ Habitat/Hydromodification\_\_\_

Please describe the problem/source(s) to be addressed by project:

Practice Name(s) & FOTG Code(s) (if applicable)	Quantity/Unit	Anticipated Install & Completion Date

Estimated total project cost:

Proposed project location description (include map):
What is the long-term ownership of the project, specifically the next 5 to 10 years and who will be responsible for the project's long-term maintenance?
Is the project publically visible? Yes___ No___
Would you be willing to post education signage or participate to some level with outreach activities (ex. field day event)?
Will the project create or enhance habitat for wildlife (ex. pollinators, birds, bats, amphibians, etc.)? Please explain.

I hereby state that I own or have control of the above listed land under consideration. I understand that in order to receive payment for practices implemented on agricultural lands that a conservation plan must be in place for the land benefitted by this cost-share program before cost-share dollars will be paid. I understand that NIRPC and/or a NRCS, ISDA or SWCD representative will need to access my property annually to photo document the status of the installed practice; that all vegetative best management practices must be maintained for a minimum of five years (1-year for cover crops) and that all structural practices must be maintained for a minimum of 10 years. Furthermore, I understand that submitting this application does not guarantee funding and that all projects require a 50% match (cash or in-kind) and that project funding will occur on a reimbursement basis.

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

Questions? Contact Joe Exl at the Northwestern Indiana Regional Planning Commission at [jexl@nirpc.org](mailto:jexl@nirpc.org) or (219) 763-6060.

**Deep River Watershed Initiative  
319 Cost-Share Program Project Evaluation Form**

Applicant:

**Eligibility**

	Yes	No	Possible Points	Points Awarded
Is the project site located on public (ex. municipality, county, public entity, home owners association, conservation organization), business, or agricultural land? IF NO, STOP HERE. PROJECT IS INELIGIBLE.			NA	NA
If the project is located is owned or managed by a Home Owners Association do they have a mechanism(s) to assure long-term maintenance of project? IF NO, STOP HERE. PROJECT IS INELIGIBLE AT THIS TIME.			NA	NA
If the project is located on agricultural lands, is a written Conservation Plan in place? IF NO, STOP HERE. PROJECT IS INELIGIBLE AT THIS TIME.			NA	NA
Is the project located within a Tier 1 Critical Area or Priority Preservation Area (Hobart Marsh Area or Deep River Conservation Corridor)? IF NO, STOP HERE. PROJECT IS INELIGIBLE.			NA	NA

**Proximity to Waterway**

	Yes	No	Possible Points	Points Awarded
Is the project located within 100-feet of a waterway or within a 100-year floodplain?			5	
If the project <i>is not</i> located within 100-feet of a waterway or within a 100-year floodplain, does the site have storm sewers or other conveyances that direct storm water to a waterway?			3	
Project does not meet either of the above criteria?			1	

**Contributing Area to Project Site**

> 75% impervious cover or soils have high runoff potential (HSG classification of D) or are classified as PHEL/HEL?			5	
25-75% impervious cover or soils have moderate runoff potential (HSG classification of C)?			3	
< 25% impervious surface cover or soils have moderately low to low runoff potential (HSG classification of B or A)?			1	

<b>Recreational &amp; Aquatic Life Use Benefits</b>				
	Yes	No	Possible Points	Points Awarded
Does the project reduce pathogen loading to an E. coli impaired waterway?			5	
Does the project reduce sediment and nutrient loading to a biotically impaired waterway?			3	
Does the project restore riparian vegetation to a biotically impaired waterway?			5	
Does the project improve bed form diversity in a biotically impaired waterway?			5	
Does the project improve channel stability in a biotically impaired waterway?			5	
Does the project provide floodplain connectivity in a biotically impaired waterway?			5	
Does the project reduce storm water runoff volume and rates to a biotically impaired waterway?			3	
Does the project address three or more of these benefits?			3	
<b>Visibility &amp; Outreach Opportunity</b>				
	Yes	No	Possible Points	Points Awarded
Project with high visibility/public accessibility?			3	
Willing to post educational signage or participate in education events?			3	
<b>Total Points Awarded</b>				

<b>Load Reduction</b>	
Model used	
Sediment (t/year)	
Phosphorus (lbs/year)	
Nitrogen (lbs/year)	
BOD (lbs/year)	
E. coli (%)	