

**SPECIAL MEETING OF THE VANDERBURGH COUNTY
BOARD OF COMMISSIONERS
HIGHLAND PIGEON WATERSHED COMMISSION
DECEMBER 13, 2023**

The Vanderburgh County Board of Commissioners met in special session on December 13, 2023 at 1:15 p.m. at the Evansville-Vanderburgh Public Library, McCullough Temporary Branch, Meeting Room, Evansville, Indiana for the purpose of discussing the possibility of creating a Highland Pigeon Watershed Commission.

Those in Attendance:

Cheryl Musgrave, Vanderburgh County Commissioner
Craig Emig, Assistant Vanderburgh County Attorney
Madelyn Grayson, Vanderburgh County Commissioner Recording Secretary
Mike Ward, Vanderburgh County Chief Deputy Surveyor
Holly McCutchan, Warrick County SWCD
Marybeth Feutz, Indiana Farm Bureau Board of Directors
Ken Smith, Indiana Dept. of Natural Resources-Division of Water Asst. Director
Gary Seibert, Gibson County Farmer & Retired Dept. of Agriculture
Eldon Maasberg, Retired Vanderburgh County Farmer
Carrie Parmenter, Posey County SWCD
Jonathan Kipling, VS Engineering

Summary Minutes of Meeting Discussion

Vanderburgh County Commissioner President, Cheryl Musgrave, called the meeting to order. The draft ordinance of the Vanderburgh County Board of Commissioners establishing a Watershed Commission for the Highland Pigeon Watershed and the draft written request for recognition of the proposed Highland Pigeon Watershed Commission were presented to those in attendance. These two documents are required by statute to be submitted to the DNR & NRC for consideration. Vanderburgh County will be the sole applicant of the three eligible counties to apply to become a Watershed Commission. The key benefit for Vanderburgh County going into this is that they would have the right to be on Pigeon Creek, inside Vanderburgh County, and the right to take care of problems on Pigeon Creek in Vanderburgh County. The document states that the Watershed Commission would be set up, and then the Watershed Commission itself would undertake studies, decide what projects, what efforts they wanted to make and cost those projects out, and the Watershed Commission itself would make a determination of what they wanted to charge, if anything, and that would be put into effect. All of the statutory questions are answered in these documents, and they have been reviewed by Christopher B. Burke Engineering. Craig Emig stated that the brunt of Christopher B. Burke Engineering's work is going to be answering questions and following up with the Natural Resources Commission and the Administrative Law Judge's that will be assigned to review the application. Commissioner Musgrave stated that should Gibson or Warrick County choose to join the commission at a later date, there is a process for them to do so. Craig Emig stated that any other counties in the watershed with less than 10% of the watershed can join the commission as a non-voting member. The written request for recognition of the proposed watershed states that Vanderburgh County will continue to communicate with all counties in the watershed, even if they are not official members. This will allow Vanderburgh County to be able to receive concerns and have a place to voice any concerns and issues and let everyone know what is going on with Pigeon Creek.

Cheryl Musgrave stated that the initial commission, if granted, by statute would be comprised of the following:

- A Vanderburgh County Commission appointee.
- The Vanderburgh County Surveyor.
- A City of Evansville appointee.
- A DNR appointee.

Mike Ward, Vanderburgh County Surveyor Chief Deputy, asked if water quality was also to be included in this right now. Craig Emig stated one of the more recent studies that was done by the Vanderburgh County Soil & Water Conservation District brought some water quality issues to light. The information from that study will be added to the submission to the NRC with the application. Cheryl Musgrave stated that the two things that Vanderburgh County is citing as reasons to form the Watershed Commission are flooding and water quality. Eldon Maasberg stated that Vanderburgh County SWCD is working on a 319 Grant for Lower Pigeon Creek. Carrie Parmenter of Posey SWCD explained 319 Grants are part of Section 319 of the EPA rules and comprises the funding mechanism for addressing non-point source pollution. These 319 Grants are awarded by the Indiana Department of Environmental Management (IDEM). Carrie Parmenter also stated that there are other studies that have been done or are currently being done on Pigeon Creek being performed by other outlying counties. Cheryl Musgrave stated that the future Watershed Commission would certainly want those studies, but they are not necessarily needed for the initial application. Eldon Maasberg asked how work on Pigeon Creek would be financed. Cheryl Musgrave stated that in the long run it would be just like a legal drain with a per parcel assessment of each parcel in the watershed with varying rates depending on whether the parcel is Ag, Commercial or Residential. The Watershed Commission would have the authority to set those rates up to the cap as outlined in the statute. Craig Emig stated that the statute outlines alternative funding, which would be County Council could grant funding from other revenue sources up to 90% of what the Watershed Commission finds is necessary to fulfill their duties. Cheryl Musgrave stated that the Watershed Commission would also be able to apply for grants. Cheryl Musgrave stated that she envisions the County Surveyor to be the leadership of this Watershed Commission board. Mike Ward asked if the easements along Pigeon Creek would need to be shown on the plat as having been dedicated to the county or the Watershed Commission going forward. Right now the plats just show them as drainage easements. Craig Emig stated that without the interlocal agreement that states otherwise, by operation of law, anything that is granted over the banks of Pigeon Creek and 75' of the banks of Pigeon Creek, that once the Watershed Commission is established would pass by law to the Watershed Commission. Craig continued that going forward the legal entity that should be receiving the benefit of those easements would be the Watershed Commission. Craig also stated that they are still trying to fully understand what the Legislature meant by the 75' pertaining to easements, but it is clear that the Watershed Commission does have the authority to acquire entrance to the land, which would mean buying it. The Watershed Commission would also have exclusive authority to perform bank stabilization, channel reconstruction and acquisition construction and maintenance of access roads, levees and channels. Jonathan Kipling of VS Engineering asked what Vanderburgh County wants to achieve with this House Bill? Craig Emig stated that what brought this about was there was a successful creation of the Kankakee River Basin Commission that combined multiple counties to address issues. That process took at least 40 years to come to completion. Based on that model, there was hope that other HUC 8 river basins could follow that. Representative Aylsworth worked with others to finalize the House Bill that was ultimately passed as a streamlined process that would allow a multi county watershed commission. Vanderburgh County wants to do this because Vanderburgh County has no authority over Pigeon Creek. It is not a legal drain and the only way to make it a legal drain would be to send certified mail to every single parcel on the watershed, which is approximately 40,000 parcels. A public hearing would then have to be held and there is not a public forum big enough to hold a public hearing for that many people in Vanderburgh County. Over the years there have been log jams, debris build up etcetera on Pigeon Creek in Vanderburgh County that the Drainage Board cannot address unless the debris/log jams would happen under a bridge. Pigeon Creek is already a legal drain in both Gibson & Warrick Counties with different funding mechanisms in place. Vanderburgh County wants to pursue filing this application while the action taken by the Legislature is still fresh and hopefully will be able to work this through to make this a success.

Ken Smith of DNR reminded Vanderburgh County that they are submitting documents to Administrative Law Judges in the Division of Hearings, and the more evidence that we attach the more background the Judges will understand. Ken Smith also suggested attaching a list of all of the studies that have been done on Pigeon Creek, and he believes

there is an index of these studies on the U.S. Geological Survey's website, and it also talks about the Highland Pigeon HUC 8.

Next Steps for Establishing A Highland Pigeon Watershed Commission:

Cheryl Musgrave stated that the ordinance establishing the commission for the Highland Pigeon Watershed Commission and the written request for recognition of the proposed Highland Pigeon Watershed Commission will both be on the December 19, 2023 agenda of the Vanderburgh County Commissioners for approval.¹ Upon approval of these documents by the Vanderburgh County Commissioners, the application to establish the Watershed Commission will be submitted to the NRC.² Once the Administrative Law Judges have reviewed the application, a hearing will be scheduled in Vanderburgh County, and everyone will be notified of the time and place of that hearing, so that all interested parties can attend and voice their support of establishing this Watershed Commission. The Administrative Law Judges will then write up a report and submit their findings and recommendations to the NRC. Craig Emig noted that if this would be denied that the NRC is supposed to supply the reasons as to which part of the requirements Vanderburgh County did not satisfy.

All of the minutes & supporting documentation addressing issues on Pigeon Creek over the years will be posted on the Vanderburgh County Surveyors website at [Highland Pigeon Watershed Development Commission / Vanderburgh County \(evansvillegov.org\)](http://HighlandPigeonWatershedDevelopmentCommission/VanderburghCounty.evansvillegov.org).

Adjournment

The meeting was adjourned at 2:10 p.m.

(No future meeting was scheduled.)

VANDERBURGH COUNTY
BOARD OF COMMISSIONERS

Cheryl A.W. Musgrave, President

(Not present at meeting.)
Justin Elpers, Vice President

(Not present at meeting.)
Ben Shoulders, Member

(Recorded and transcribed by Madelyn Grayson)

¹ See attachments at the end of these minutes.

² The application was submitted in early January 2024.

ORDINANCE NO. CO.12.23-029
AN ORDINANCE ESTABLISHING A WATERSHED DEVELOPMENT
COMMISSION FOR THE PIGEON CREEK WATERSHED

WHEREAS, House Bill 1639 was passed by the General Assembly and became Public Law 251-2023, effective July 1, 2023, when signed by Governor Holcomb following the 2023 session of the General Assembly;

WHEREAS, Section 13 of Public Law 251-2023 added a new article to Indiana Code, I.C. § 14-30.5 et. seq., titled Watershed Development Commissions;

WHEREAS, the executives of one or more counties may adopt ordinances designating their counties as members of a proposed watershed development commission;

WHEREAS, a watershed development commission may be established for certain flood damage reduction, drainage, storm water management, and other purposes;

WHEREAS, Pigeon Creek in Vanderburgh County is not a Legal Drain and Vanderburgh County lacks capacity and authority to affect major impacts to Pigeon Creek. It is impractical to establish it as a Legal Drain at this point.

WHEREAS, a watershed development commission may also have water quality purposes if its board develops a water quality improvement plan;

WHEREAS, a watershed development commission is to be governed by a board that includes a representative from the Department of Natural Resources and three members from each participating county, specifically its Surveyor, a Commissioner (or a Commissioner appointee), and a representative from the largest city in the county that is within the watershed;

WHEREAS, a watershed development commission is required to develop a flood damage reduction and drainage plan for its designated watershed;

WHEREAS, a watershed development commission is granted exclusive authority to perform drainage and flood damage reduction activities within the channel of the river that is the surface water outlet of its designated watershed or authorized to enter into an interlocal cooperation agreement with an existing local governmental authority to apportion flood damage reduction authority and financial support between the two entities;

WHEREAS, Pigeon Creek runs through Gibson County, Warrick County and Vanderburgh County, resulting in differing jurisdictions, control and issues despite each individual county facing similar problems with flood damage reduction, drainage and storm water management; and

WHEREAS, Vanderburgh County is establishing the formation of a watershed development commission to identify and tackle problems with Pigeon Creek, including flood damage reduction, drainage and water quality issues.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of Vanderburgh County, Indiana hereby resolve the following:

SECTION 1: Creation of Watershed Commission

(1) The designated watershed within which the proposed Pigeon Creek Watershed Development Commission would exercise its powers is defined by:

(A) the surface water outlet Pigeon Creek, which starts in Gibson County, flows generally south through Gibson and Warrick Counties before heading generally west through Warrick and Vanderburgh Counties. Pigeon Creek joins the Ohio River in Evansville. Pigeon Creek is clearly labeled in the attached map identified as "Exhibit A;" and

(B) the geographic boundaries of the area drained by Pigeon Creek are defined by the combination of three HUC-10 watersheds – Headwaters Pigeon Creek, Big Creek-Pigeon Creek, and Pigeon Creek – totaling approximately 235,000 acres, as shown in the attached map identified as "Exhibit A."

(2) The area of the county that is inside the geographic boundaries of the designated watershed, as identified under subdivision (1)(B) is on the attached map identified as "Vand_HUC8_Parcel" consisting of 96,025.56 acres or approximately 14.5% of the Highland-Pigeon Watershed.

(3) The flood damage reduction, drainage, storm water management, or water infrastructure purposes for which the proposed commission would be established are detailed in the attached studies, and include channel modifications to increase channel stability and reduce ongoing maintenance needs; channel maintenance and wood management to decrease debris buildup, thereby decreasing localized flooding and improving safety for recreators; and support of agricultural, residential, and municipal stormwater best management practices to reduce the inputs of flow and sediment to Pigeon Creek.

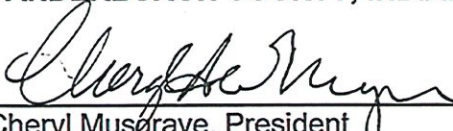
(4) The flood damage reduction, drainage, storm water management, or water infrastructure needs of Vanderburgh County that would be addressed through the county's membership in the proposed commission include flood reduction through flood storage facilities, flood damage reduction, improved stormwater infrastructure, removal of logjams, decreased stormwater flows, and increased recreational opportunities.

SECTION 2: Effective Date This Ordinance shall be in full force and effect after its passage by the Board of Commissioners of Vanderburgh County, Indiana, and following publication as provided by I.C. § 5-3-1.

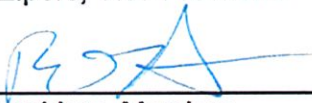
First passed by the Board of Commissioners of Vanderburgh County, Indiana this 19th day of DECEMBER, 2023.

Final passage by the Board of Commissioners of Vanderburgh County, Indiana this 19th day of DECEMBER, 2023.

**THE BOARD OF COMMISSIONERS OF
VANDERBURGH COUNTY, INDIANA**

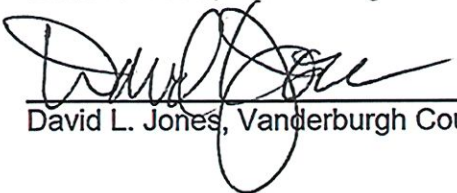

Cheryl Musgrave, President

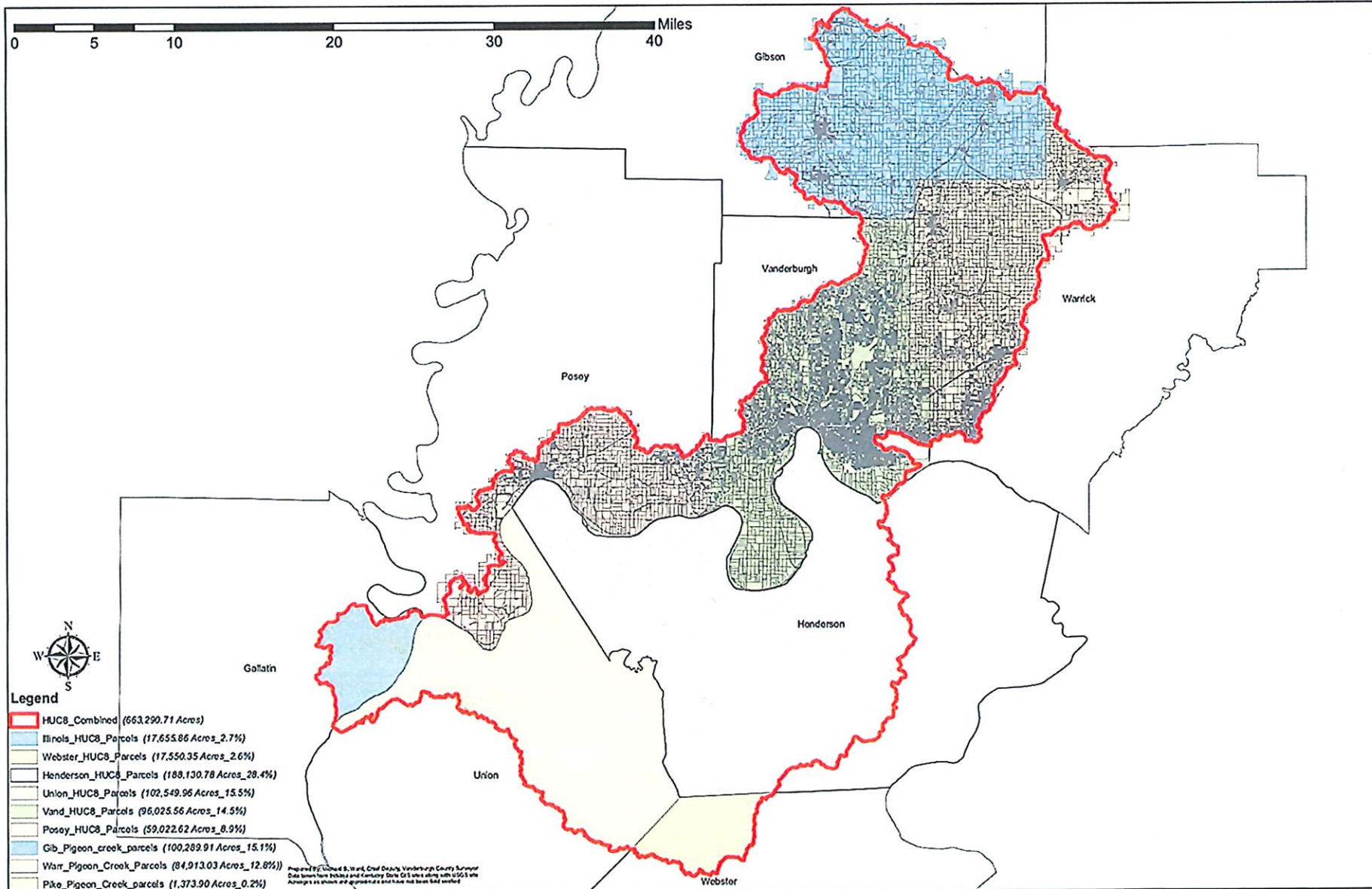

Justin Elpers, Vice President


Ben Shoulders, Member

ATTEST:


Brian A. Gerth, Vanderburgh County Auditor


David L. Jones, Vanderburgh County Attorney





VANDERBURGH COUNTY

ONE N.W. MARTIN LUTHER KING, JR. BLVD.
CIVIC CENTER ROOM # 305
EVANSVILLE, INDIANA 47708

OFFICE OF THE BOARD OF COMMISSIONERS

CHERYL MUSGRAVE, PRESIDENT
JUSTIN ELPERS, VICE PRESIDENT
BEN SHOULDERS, MEMBER

December 19, 2023

RE: Vanderburgh County - Surveyor - Drainage
Our Client No. 2019.014-001

To Whom It May Concern:

Enclosed please find the *ORDINANCE ESTABLISHING A WATERSHED DEVELOPMENT COMMISSION FOR THE PIGEON WATERSHED* and *WRITTEN REQUEST FOR RECOGNITION OF THE PROPOSED PIGEON WATERSHED COMMISSION*. We greatly appreciate your consideration of this great opportunity to address longstanding problems known to exist within the Highland-Pigeon Watershed. We expect you will realize that this application is the latest effort and best opportunity to address the long-standing problems.

Enclosed we will demonstrate that numerous studies, research, and investigations have been performed within the watershed. Due to the voluminous research, the problems and issues are well known. Problematically because of the various jurisdictions and authorities performing these studies to cover various and differing interests, the result can seem piecemeal and disjointed. We anticipate using the newly formed watershed commission as a centralized repository of this information and a clearinghouse for common interests within the watershed. Despite the wealth of knowledge and research on the topic, this type of centralized cooperation has so far eluded the affected jurisdictions despite repeated efforts to accomplish that goal.

Much effort and planning has gone into the application. A study committee has met numerous times as shown by the meeting minutes. A broad and varied array of stakeholders from the various counties have attended and participated extensively in the meetings, including surveyors, commissioners, attorneys, engineers, farmers, and developers as shown in the meeting attendance sheets. As a result of the extensive work and collaboration, we present to you our request.

305 ADMINISTRATION BLDG. • N.W. M. L. KING JR. BLVD. • CIVIC CENTER COMPLEX • EVANSVILLE IN 47708
PHONE: 812-435-5241 FAX: 812-435-5963

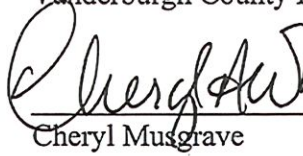
December 19, 2023

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As the meeting minutes reflect, the commission has broad support from the neighboring counties despite Vanderburgh County's application as the sole establishing member. Both Gibson and Warrick already have Pigeon Creek established as a Legal Drain and parsing the responsibilities and assessments will necessarily take further deliberations. We look forward to presenting the Request and anticipate support from the neighboring counties for the establishment of the Commission.

Respectfully yours,

Vanderburgh County Board of Commissioners


Cheryl Musgrave


Justin Elpers


Ben Shoulders

CRE/

cc:

**WRITTEN REQUEST FOR RECOGNITION OF THE PROPOSED
PIGEON WATERSHED COMMISSION**

IC §14-30.5-2-2(e)(1): "Are the purposes for which the proposed commission would be established, as set forth in the ordinance or ordinances under section 1(b)(3) of this chapter, within the purposes set forth in IC 14-30.5-3-1 for which a watershed development commission may be established?"

Vanderburgh County seeks to establish the Watershed Commission in order to build upon and coalesce the extensive, yet somewhat disjointed, studies that have detailed the the issues concerning Pigeon Creek in Vanderburgh County. Initially Vanderburgh County proposes adding no assessments at the creation of the commission. Once the comprehensive study is complete, the watershed commission would then create its detailed plan to address the issues discovered in the study. The results of the study and the creation of the plan would include comments from all authorities within the watershed. Following discussion and approval of the plan, then assessments, if any, as deemed necessary would be presented to the respective fiscal bodies for review. Vanderburgh County believes this is the best and most practical path forward as the authority of the commission must be established first before imposing assessments. Vanderburgh County expects the planning phase will last at least one calendar year. That will provide ample opportunity for residents and neighboring authorities to review, participate, and assist in the process. Imposing assessments on the residents of the watershed prior to creating the commission and the formation of a concrete plan of action with input from the various stakeholders is impractical and imprudent.

The commission would rank and prioritize areas of concern following statutory factors concerning flood damage reduction and water quality. The high priority areas will be targeted first, followed by medium and low priority areas of the Pigeon Creek Watershed. Additionally, concerns identified by the commission will be used to target implementation within the project's critical areas when landowner interest outpaces available funds. The identified high priority concerns will be used for targeting purposes. The rating of each concern will be determined during cost share program development and additional items may be added to further refine how each concern area be used to target hot spots or problem areas identified within the Pigeon Creek Watershed. A rating system will be developed prior to cost of program implementation – the rating system will assign a weighted score to each potential project based on its location in a priority watershed as well as the following concerns:

- Ensuring that highly erodible soils areas are protected or covered.
- Targeting streambank erosion and buffer strip installation in areas where erosion and/or narrow buffers were identified during plan development.
- Working with partners to reduce the impacts of drainage within the Pigeon Creek Watershed.

- Implementing best management practices to maintain the natural course while mitigating any flood damage and provide the most benefit to the watershed.

IC §14-30.5-2-2(e)(2): "Do the purposes of the proposed commission, as set forth in the ordinance or ordinances under section 1(b)(3) of this chapter, correspond to legitimate flood damage reduction, drainage, storm water management, recreation, or water infrastructure needs of each county seeking establishment of the commission, as set forth under section 1(b)(4) of this chapter?"

A tributary of the Ohio River in southwestern Indiana, Pigeon Creek drains a 323 square-mile watershed covering portions of Gibson, Warrick and Vanderburgh counties, and a small portion of Pike County. The main channel of Pigeon Creek watershed is approximately 48 miles long and starts from an area just south of Princeton in Gibson County and flows downstream to join the Ohio River in Evansville. The main channel and tributaries of Pigeon Creek in both Gibson and Warrick counties have been extensively modified by both straightening and dredging. In Vanderburgh County Pigeon Creek remains a natural stream.

Studies show that multiple interests and needs exist within different areas of the watershed. Upstream counties may desire a reduction of flood damages and an efficient drainage outlet for their modified watershed areas. Each receiving county also would like to be able to accommodate the increasing magnitude of flow it receives from sources. Vanderburgh County would like to provide an outlet for the ever-increasing flow delivered to it from out-of-county sources while reducing the flooding, erosion and logjams within Vanderburgh County.

It also desires preserving or enhancing Pigeon Creek as well as improving the sustainability of the creek as a community resource by managing flows and water quality. Efforts to achieve these multi-county goals has at times frustrated parties involved. There is also a concern that the impacts of changing weather patterns may exacerbate the current problems. It is believed that a well-thought-out plan that includes a comprehensive stream system assessment of the entire watershed and an examination of drainage and development activities occurring within the watershed can provide a road map and strategies to address these multiple county interests in an equitable and sustainable manner.

The proposed commission could provide a road map and an implementation plan for addressing problems and identifying potential vulnerabilities. Such a plan is also expected to bring affected parties together to understand each other's needs as they impact flooding and work out solutions that can reduce the flooding threats to critical facilities and major transportation systems. In addition, the report will address drainage concerns, provide strategies for managing large wood in the channel, and improve the water quality. Such a plan could demonstrate a proactive approach adopted by the drainage boards and partner agencies to increase the community benefit and reduce flood damage.

IC §14-30.5-2-2(e)(3): "Is it reasonable to expect that the establishment of a commission having powers under this article only in the county or counties from which the ordinance or ordinances were submitted under section 1(c)(1) of this chapter would effectively address the flood damage reduction, drainage, storm water management, recreation, or water infrastructure needs of each county that submitted an ordinance under section 1(c)(1) of this chapter?"

Due to Vanderburgh County lacking authority over Pigeon Creek while Gibson and Warrick Counties having different funding mechanisms, the establishment of the commission is the only practical path forward to address the flood damage reduction and drainage issues known to affect Pigeon Creek. A comprehensive plan will be implemented to improve the watershed's success. While much thought and expertise has been put into the planning process, not all scenarios can be foreseen. Oftentimes there are changes such as a shift in community attitude/behavior, changes in resource concerns, development of new information or accomplishing a goal sooner or later than expected. By implementing a comprehensive plan, the commission can adjust the watershed management plan to ensure project success.

IC §14-30.5-2-2(e)(4): "Is it reasonable to expect that the establishment of a commission that has powers under this article only in the area or areas inside the geographic boundaries of the designated watershed would effectively address the flood damage reduction, drainage, storm water management, recreation, or water infrastructure needs of each county that submitted an ordinance under section 1(c)(1) of this chapter?"

Prevention of potential future issues will be made possible through the adoption and revision of the flood damage reduction and drainage plan, development of a Watershed Commission, and by monitoring the recent, significant alterations to the watershed. By preventing rather than reacting to issues, the commission will be used to implement other improvements.

Assessment and prioritization of impaired segments will help to target those areas having the greatest need for maintenance or other improvements. Identifying and utilizing the channel maintenance best management practices will help to promote sustainable channels and potentially reduce the overall funding need for channel maintenance over time.

As reflected in the attached studies, best management practices to be used by the commission will include channel modifications to increase channel stability and reduce ongoing maintenance needs; channel maintenance and wood management to decrease debris buildup, thereby decreasing localized flooding and improving safety for recreators; and support of agricultural, residential, and municipal stormwater best management practices to reduce the inputs of flow and sediment to Pigeon Creek. Coordinating improvements to several roadway

crossings may help to reduce flooding in the immediate upstream areas. The benefits realized by the recommended alternatives are significant. The improvements will be completed as funds are available. The problems are expected to worsen over time; as a result, extensive delays in implementing the recommended alternatives should be avoided.

IC §14-30.5-2-2(e)(5): "Is the territory of the proposed commission at least as large as the entirety of the same eight (8) digit U.S. Geological Survey hydrologic unit code?"

See the attached map detailing the HUC-8. Only the area within Vanderburgh County would be within the jurisdiction of the proposed watershed commission until other counties join the commission. Vanderburgh County will include all areas of the watershed for information and comments while encouraging Gibson and Warrick Counties to join for the benefit of the entire watershed.

IC §14-30.5-2-2(e)(6): "Has a regional watershed study or watershed management plan been conducted in consultation with the Indiana finance authority and the department of natural resources that assesses water use, water quality, drinking water systems, wastewater management systems, storm water management, flood control, drainage management, recreational uses, natural resources, and water infrastructure needs of the watershed of the proposed commission? If so, can the establishment of the proposed commission be expected to address the needs identified in that study or management plan?"

Despite a lack of funding in Vanderburgh County and different jurisdictions having unique funding mechanisms, extensive study and plans have been completed identifying the needs of Pigeon Creek. The formation of this watershed commission is the best opportunity to implement the needed improvements. Vanderburgh County is grateful for the opportunity to utilize this thoughtful legislation allowing the creation of a multi-county watershed commission to address the long-standing needs of Pigeon Creek. While our preparation and goals are modest, Vanderburgh County is hopeful the neighboring counties within the Highland-Pigeon Watershed will see the benefit of the Commission as the driving force to improving Pigeon Creek within Vanderburgh County.

The nature of the drainage issues is unique and complicated. The widespread flooding that occurs during and after heavy rainfall events appears to be primarily caused by the wide, flat floodplain. While the improvements already implemented have likely decreased the severity of the flooding, the overall benefit of the improvements appears to be insufficient so far. It is expected that structural stormwater solutions will be studied as a viable means to reduce the severity of the flooding along Pigeon Creek. Proper channel maintenance throughout the watershed was identified as a critical component to maximizing the flow capacity of the existing drainage network. Best management practices and proper channel sizing can provide some reduction in flooding; however, the true benefit of these

practices is expected to be a reduction in expected maintenance costs and an increase in channel stability. Adoption of a well-crafted comprehensive plan and the institution of watershed wide coordination will help to prevent the development of new or more severe stormwater management issues.