

2023 Report on Regulated Drains Vanderburgh County Surveyor's Office

Under IC 36-9-27 hereafter referred to as Drainage Law, the County Surveyor is required to make a report to the Drainage Board regarding the status of legal drains within the County. This report is duly submitted to address those requirements.

Under Section 36-9-27-34, the County Surveyor should classify drains as either in need of reconstruction, in need of periodic maintenance or drains that should be vacated. Based upon the definitions found in the code it is the opinion of the Vanderburgh County Surveyor that all legal drains within Vanderburgh County should be classified as in need of periodic maintenance. A portion of Aiken Ditch needs to be vacated and is referenced later in the report.

The Report is broken into the following sections:

- Report on Drains
- Major Issues
- Current Account Balances
- Proposed Ditch Rates

Report on Drains

Vanderburgh County has approximately 80 miles of regulated drain. The drains consist of thirty-six drains. For the purpose of this report the drains are divided into the following areas:

- **Southeast Side and South Side Ditches**
- **Center Township Drainage: Sonntag-Stevens, Henry and Keil Ditch**
- **Armstrong/Scott Townships Drainage**
- **Union Township**
- **East Side Urban (Knight City)**
- **Multicounty Drainage**

During 2023 measured rainfall per National Weather Service Paducah for Evansville, IN was 41.63" which was 6.64" below the 30-year average annual rainfall for Evansville. Temperatures trended higher with an annual average temperature of 59.2° F, which is an increase of 2.1° F over the 30-year average.

<u>Year</u>	<u>Rainfall (in inches) as measured at Evansville Regional</u>
2023	41.63
2022	45.32
2021	45.60
2020	60.61
2019	61.22
2018	55.69
2017	43.48
2016	49.58
2015	51.94

Southeast Side and South Side Ditches

Kolb Ditch, runs diagonally from Covert Avenue, beginning about ½ mile east of Green River Road, thence through Price Park, Eastland Estates, Audubon Estates, Chickasaw Park, then under the intersection of Pollack Avenue and Fuquay Road, through the Knight Township Levee, Angel Mounds State Historic Site, and into the Ohio River. Kolb Ditch is a little less than a mile and a half long and drains an area from Dexter Avenue on the west to the Warrick County Line on the east, and from the levee on the south to Gum Street on the north. During the year maintenance consisted of a spray application for broadleaf weeds and brush and bottom sterilization plus a fall mowing on Section A (Pollack to Chickasaw Park) of the drain and a mid-summer and fall mowing on Section B (Chickasaw Park to the north) of the drain.

Like many of the east side drains, the channel slope is relatively flat causing the drain to silt. Also, a portion of the drain runs through the retention pond for Audubon Estates. This pond has experienced a drop in the pool elevation due to a combination of porous soils and also possibly due to the construction of I-69. The low water table in this pond has caused two problems, those being the erosion of both the inlet and outlet where Kolb Ditch runs through the pond. In 2017 a failed structure was removed on the outlet end and replaced with a rip rap channel. In 2021, the portion of the ditch that lies in farm field northwest of the intersection of Pollack and Fuquay was selectively dipped, restoring the flow of water south through the pipe under the intersection however, a portion of this ditch has already begun to re-silt. An issue arose during this silt dipping due to a contractor not having locates and coming dangerously close to large gas main. In the future, any excavation projects in this area will be coordinated with 811 and CenterPoint to ensure safety of all. Letters were sent to 2 landowners just west of Ridgeway Avenue regarding landscaping and trees that were beginning to encroach into the ditch and asked to remove these or trim them to where they are above the top of the ditch. This issue was resolved with the banks being cleared to the top of the bank.

For 2024, the Surveyor recommends maintenance as follows: continue bottom sterilization and spraying of broadleaf weeds and brush as per previous year, and continue mowing as scheduled. Kolb Ditch will not be billed during 2024.



Kolb Ditch South of Pollack



Kolb Ditch Northwest of Pollack and Fuquay

Eagle Slough, at 30,040 feet or about 5 ½ miles long, drains much of the land on the southeast side of Evansville and a good portion of the Ohio River bottoms in Knight Township. Eagle Slough in many places runs parallel to the levee and it is the understanding that it was constructed at the time that the levee was constructed with the dirt utilized in the construction of the levee. Eagle Slough watershed stretches from Waterworks Road on the west to about ½ mile past Green River Road on the east, and is roughly diamond shaped, reaching as far north as Bellemeade Avenue at its pinnacle and as far south as a point on the Ohio River just west of Wathen Road. The drain also receives drainage not only from runoff but also through short tributaries from levee pump stations K2 and K3 as well as the flow from Aiken Ditch (which carries the flow from levee pump station K1).

The drain is, overall, in good condition. Annual Ohio River floodwater continues to prevent herbicide applications sufficient to completely control undesirable vegetation. Continuous deposits of flood debris can pose significant problems when the material accumulates and obstructs the waterway as well as wildlife activity including construction of beaver dams. Broadleaf and brush herbicide application was not completed during 2022. Eagle Slough will not be billed in 2024.

A flyover was done on Eagle Slough in early January, 2023. This has allowed the office to review the data and determine what areas additional maintenance will need to be done on the Ditch from I-69 west to its termination. At this time, there are no immediate areas of concern.



Eagle Slough east of Green River Road



Eagle Slough West of Weinbach Avenue

Aiken Ditch drains much of the undeveloped farm land in area east of Green River Road, south of Pollack and north and west of I-69. The regulation portion of the ditch begins on the south side of Pollack Avenue near the intersection of Seasons Ridge Blvd and proceeds west approximately 0.6 mile before turning southeast under I-69 at the Levee Pump Station K-1 and then flows southwest to where it intersects Eagle Slough just west of Green River Road. A portion of Aiken Ditch south of I-69 runs through an area delineated as a wetland by the IDNR. Special permits are required to operate within the designated wetland for certain ditch maintenance procedures customarily employed on regulated drains.

Maintenance of this drain consists of spray application for broadleaf weeds and brush over the entire drain as well as a mid-summer mowing of a portion of the drain and application of dormant herbicide and bottom sterilization on a portion of the drain. It is recommended that this application continue with additional spraying of a growth inhibitor in the early spring that was began in 2016 when rain events prevent mowing of the section from Pollack Avenue to the levee pump station.

The Vanderburgh County Surveyor's Office is going to be vacating a portion of Aiken Ditch. That portion of the regulated drain under current review bisects the property at 5115 Pollack Avenue. We would also need to add a portion to the east of said property where the ditch now flows. The County Surveyor is now bringing this recommendation to the Drainage Board.

Growth inhibitor wasn't completed in 2022 due to weather conditions. Aiken Ditch will not be billed in 2024.

Center Township Drainage

Sonntag-Stevens Ditch drains the Center Township industrial area between Lynch Road and St. George Road east of U.S. 41 and west of Oak Hill Road as well as subdivisions in this area and certain residential areas on the east side of Oak Hill Road. The drain begins just west of Oak Hill Road in two locations on the North and South sides of Cloverlawn 2 Subdivision. The two channels merge at the southwest corner of Cloverlawn and then proceeds generally west through the highly industrialized area between Lynch and Bergdolt Road before emptying to Keil drain on the south side of the former Whirlpool plant. A second channel of Sonntag Stevens begins just west of the intersection of Lynch and Hitch Peters Roads and flows northwest for approximately 1000' to a point where it intersects the main channel.

The drain is crossed by four railroad crossings in the following order from upstream to downstream:

- An out of service siding that appears to have at one time serviced mainly Purina Mills that is believed to be part of the CSX RR.
- A siding that serviced Inland Container (currently closed) that is believed to be part of CSX RR.
- The CSX spur line that crosses US 41 and parallels Lynch Road and then proceeds north and services Purina Mills and Inland Container and a few other industries.
- An abandoned spur line that connected to both the CSX and the Indiana Southern rail lines. This line from the Indiana Southern to the south where it crosses Sonntag Stevens Drain is completely gone.

Current maintenance consists of a late spring mowing for the areas within Cloverlawn subdivision. The remaining portion of the ditch receives a bottom sterilization treatment, spraying for broadleaf and brush and dormant spray treatment as well as a fall mowing and the addition of a mid-summer mowing, as was done in 2021, on the entire ditch.

There is currently a project being reviewed to alleviate the flooding in the area of Bergdolt Road and Clover Road by the County Engineer's Office that may involve work being done to Sonntag-Stevens Ditch. This is in the preliminary planning process and work will be coordinated with the County Surveyor's Office. Sonntag Stevens will not be billed in 2024.

Keil Ditch runs parallel to the Indiana Southern (former Conrail) RR tracks beginning at St. George Road and proceeding along the back side of the old Whirlpool plant to where it intersects Sonntag-Stevens just northeast of Highway 41. While Keil was never mowed as part of a regular schedule it is recommend that beginning in 2019 that 2 mows be done on the ditch beginning at St George and going south to where a pipe crosses the ditch just north of the east spur (approximately 800'). Growth of phragmites in the area near Meisler trailers needs to be addressed by dipping the area. Selective dipping also is

needed along the CenterPoint property especially where the channel is causing washing on the east bank. This work was bid out in 2021, but due to termination of a contract it was not completed and was not rebid in 2022. It is recommended that it be rebid in 2024.



Area where Phragmites are growing

Recommendations are to continue with herbicide application. An increase in the application rate in some areas where shrub trees are along the bank is needed. The drain needs to be cleared of debris and Phragmites (common reed) for approximately 1500' beginning at the northwest corner of the Meisler property south to the intersection with Sonntag Steven. Furthermore, a blockage and some erosion along the east bank near Sonntag Stevens also needs to be addressed. Keil Ditch will not be billed in 2024.

Henry Ditch is a short ditch approximately 0.6 of mile located along the north side of Kansas Road and then crosses Kansas Road via a culvert and heads southeast to Blue Grass Creek. The first portion of this drain is essentially the north side road ditch of Kansas Road. Small growth necessitated mowing along this stretch of ditch. To the south, the drain has some heavy erosion.

As with 2023, a single fall mowing of the entire drain and a mid-summer mow along Kansas Road only is recommended for 2024 as well a dormant spray. The drain along Kansas Road had the bottom sterilized and a mow completed. It is recommended in 2024 that the ditch bottom be cleaned and dipped. Also, in the future that work begin on reshaping the slopes of the ditch on the south side of Kansas Road due to serious pockets

of erosion. This work will be done in conjunction with the local property owner. Henry Ditch will be billed in 2024.



Armstrong/Scott Townships Ditches

The County Surveyor’s Office, for some time, has entered into contracts with the Big Creek Drainage Association or its members for annual maintenance of the drains in Armstrong and Scott Townships. These drains include Pond Flat Main, Pond Flat Lateral A, Pond Flat Lateral B, Pond Flat Lateral D, Baehl, Buente Upper Big Creek, Hoefling, Maasberg, Kneer, Rexing Creek, Singer, Maidlow, Wallenmeyer and Barr’s Creek. The drains under their purview are in good condition and generally only require regular annual maintenance and in some cases small amounts of additional maintenance work.

In April of 2022, the County Surveyor’s Office submitted a Construction in a Floodway permit to the Indiana Division of Water for a ditch reconstruction project on Pond Flat Main. This work started approximately 382’ north of the intersection of Nisbet Road and Pond Flat Main and continued southwesterly on alternating sides of the ditch for approximately 5300’. This reconstruction effort consisted of re-establishing the banks by using a long-reach excavator to pull the banks back to a 1.5:1 slope to allow for more efficient maintenance and flow. This work was completed in October, 2022. There was additional ditch maintenance done by Big Creek Drainage Association on Baehl Ditch from Wallenmeyer Road crossing south for approximately one-half mile. The County Surveyor’s office is looking into the crossing of Baehl Ditch at the intersection with Wallenmeyer Road to clean out and fix the ditch alignment of the culvert at this crossing. We will be meeting with the directors of BCDA on January 10th to discuss what work they will be performing and what ditches need to be billed for 2024.

Union Township

Union Township Drains, consist of Barnett, Cypress Dale/Maddox, Edmond, Helfrich/Happe and Kamp Drains. Over the past several decades these drains have been maintained by Union Township Ditch Association that customarily submits a very low bid. These drains are all in very good condition. During 2021 maintenance consisted of selective mowing, ditch dipping and herbicidal spray applications.

For 2021, the Union Township Ditch Association had requested to remove herbicidal spray applications from all Union Township drains. For 2024, the Ditch Association has requested that spraying of Barnett, Cypress Dale/Maddox and Edmond be included in the maintenance again this year. Maintenance on Happe/Helfrich and Kamp ditches is needed in 2024 so it will be necessary to bill these 2 ditches.



Helfrich-Happe Ditch looking east from Seminary Road-typical of a Union Township Ditch

East Side Urban (Knight City)

The East Side Urban drains can be broken into two areas, those south of Morgan Avenue and those north.

The eight drains that comprise ESU-S½ convey storm water runoff northwardly and thence westward via the Old Wabash and Erie Canal, under Morgan Avenue, at the northwest corner of Wesselman Woods, thence through a natural slough into Pigeon Creek. The ESU-S ½ Drainage captures drainage from an area defined by north of Lincoln Avenue, east of Green River Road, west of Warrick County, and south of Morgan Avenue. The eight individual drains comprising ESU-S½ are Bonnie View Extension, Bonnie View, Crawford Brandeis, Hirsch, Kelly, Nurrenbern, Stockfleth and Wabash Erie. While Harper Ditch is maintained through a separate account, it is integral with ESU-S½. For purposes of this report, Harper Ditch conditions will be included with ESU-S½. It is the recommendation of the County Surveyor's Office that we combine Harper Ditch to the ESU-S ½ per IC 36-9-27-53. We are also asking to have the portion

of Harper Ditch that is boxed to be inspected this year. It's been 10 years since the last inspection and another one is due. After we receive the inspection video and comments, we may be asking for additional work to be done, if recommended and needed.

The City of Evansville is proposing a project to help alleviate flooding in the East Side Urban watershed. The project kicked off in December, 2022 with the main points being determining what challenges could be creating these flooding issues. The first phase of the project has been sent out for bids and work is anticipated to start in spring of 2024. To help with the future phases of this project, the County Surveyor's office is going to be having the Wabash Erie Canal and Hirsch Ditch silt dipped. With the costs of this project not yet fully known, it is necessary to bill East Side Urban for 2024.

Bonnie View Extension, located in Summit Place 2 subdivision, is a short (0.1 mile) drain beginning at Cherry Street and proceeding north to Bonnie View. The drain was mowed four times during 2018.

In 2019, the bottom of the drain was selectively dipped to promote better drainage. The County Surveyor continues to recommend a mowing schedule of four times per year to promote adequate grass cover of the channel banks and eliminate weeds. Previously, the County Surveyor at the request of and in conjunction with the Evansville City Engineering Office explored design alternatives to promote better drainage in this area. The City put forth a design that consisted of excavating the ditch out to widen the bottom, and steepen the slopes and ultimately concreting the bottom and side slopes. However, material alone was estimated to cost around \$400,000 without the cost of labor. This idea

was abandoned due to lack of economic feasibility.



Bonnie View Extension

Bonnie View Drain is an east west paved channel (0.25 miles) along its entire length south of the Target complex. The drain ties into Crawford Brandeis at the Southwest Corner of the Target Plaza at Burkhardt Road. The drain is in excellent condition. Beginning in 2017 a program was initiated of spraying, and, when required, cleaning the joints twice a year for weeds and clearing of debris and silt. It is recommended that this program be continued in 2024.



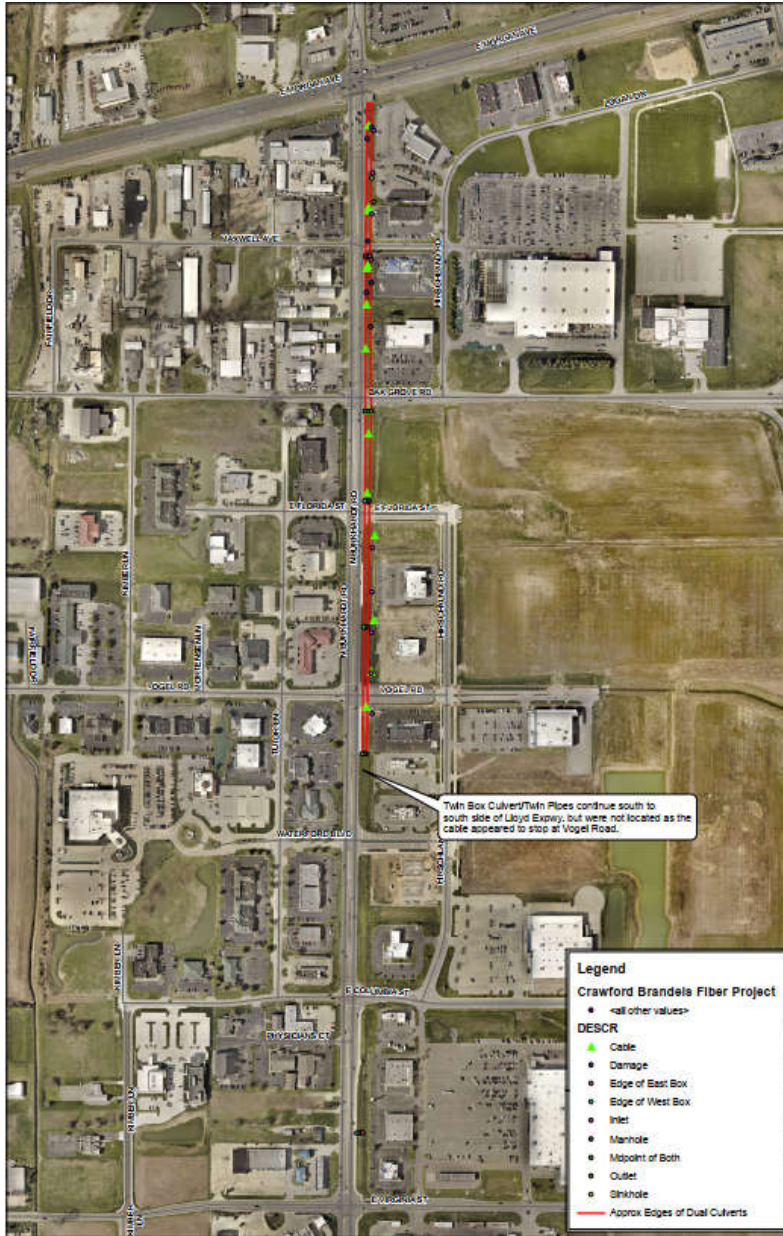
Bonnie View Concrete Ribbon Liner

Crawford Brandeis is located on the East side of Burkhardt Road at a point 660 feet North of Lincoln Avenue and runs North to the Lloyd Expressway and continues North under Oak Grove Road to Morgan Avenue it then proceeds under Burkhardt Road to the west along the South side of the Norfolk Southern (NS) Railroad to the mouth of Stockfleth Ditch. The portion of this ditch is discussed under “the canal”. A large portion of Crawford Brandeis from the southern boundary of the Target Center north under the Lloyd Expressway, and then continuing North under Virginia Street and Oak Grove Road all the way to Morgan Avenue is now piped. A small part of the Crawford Brandeis Drain south of the Target Plaza was mowed four times on the same schedule as Bonnie View Extension.

In early May of 2021, it was discovered that a fiber contractor, Veritas Communications along with their engineer Zayo, serving as subcontractors for AT&T were installing fiber along the eastern side of Burkhardt Road. In numerous locations, this fiber installation involved boring that was conducted near and on top of the twin box culverts that comprise Crawford Brandeis Ditch. The installation of fiber, especially on the rapidly developing east side, continues to be very difficult for the Surveyor’s Office to keep up with. A vast majority of the contractors are either unaware of the existence of the legal drains, and some even after being told they are encroaching have told office staff that they will not stop working.

This effort by Zayo to install fiber along top of Crawford Brandeis was ordered to cease, and was eventually moved to the west side of Burkhardt Road. As a result of this project, the Vanderburgh County Surveyor's Office contracted Hydromax to use a robotic apparatus to inspect the entirety of the ditch from its beginning just south of the Target Pavilion to where it merges with Kelly Ditch. This inspection showed no significant damage to the box culverts, and will also allow for the Surveyor's Office to formulate future maintenance plans for the ditch. Some large and obstructive debris was removed during this effort. A sign for the Target complex was erected in November, 2023 without the permission of the Drainage Board. The base of this sign was found to encroach into the right of entry of the drain. It was decided by the County Surveyor to allow the sign to stand with an application to affect being filed by the sign builder noting that this sign would be allowed to stay but was in great peril should any work need to be done on this structure in the future.

It is recommended that these box culverts be inspected on a regular basis (every 10-15 years) going forward with cameras to ensure that the integrity of the boxes is maintained and no large debris exists in the pipes.



THE CANAL

Portions of the old Wabash Erie Canal along the south side of the Norfolk Southern Railroad that runs parallel to Morgan Avenue consists of Kelly (1.45 miles beginning at the Warrick County Line and proceeds west to where it intersects with Crawford Brandeis at Burkhardt Road) a portion of Crawford Brandeis (.29 miles from Burkhardt Road to of the intersection of Stockfleth) and Hirsch (0.65 miles beginning at the end of Crawford Brandeis and ending at Green River Road).

Previously the Canal had been sprayed but beginning in 2013 a one-time mowing was done on the south bank (non-railroad side) of the drain. This mowing has continued and is done one to three times per year with the mowing done three times in 2022. It is

recommended that the south side of these portion of drains be scheduled for a late spring and mid-summer mowing and a fall mowing during 2024¹. In 2017 due to the appearance of Creeping Water Primrose the channel was sprayed along with a portion of Nurrenbern. This application was needed in 2023 and will continue to be applied as needed.



Stock Picture of Creeping Water Primrose



Primrose in the Canal



Initial Repair



Completed Repair

¹ Mowing on those portions of Crawford Brandeis, Kelly, Hirsch and the Wabash Erie Canal that parallel the NS Railroad is limited to the south side of those drains due to limitations of equipment and the inability to access the north side of the drains due to the location of the railroad tracks.



On a longer-term view, the portion of the canal between Stockfleth and Green River Road that is Hirsch Ditch has several large culverts that allow rail and vehicle access. Many of these culverts are old and need to be inspected and either replaced or removed. As rail access is removed, the culverts need to be permanently removed. This is the case where rail service to the old Complete Lumber site has been discontinued. The County Surveyor now has a contact with the railroad and will work with them in the near future to see if any of these pipes may be removed. The work being done by the City of Evansville is also going to require these pipes to be removed in order to help alleviate the East Side flooding situation. We will keep the Board apprised of the situation as it progresses. This project is also going to involve the need to revisit the billboards that were allowed to be placed within the right of entry along Oak Grove Road. The design currently will definitely affect the locations so this is an issue that will have to be addressed in the future of this project.

Wabash Erie Canal has a total length of 0.85 miles. Like the Canal this drain consists of the old Wabash Erie Canal on the south side of the NS Railroad that runs parallel to Morgan Avenue beginning at Green River Road to Stockwell Road and then runs through Wesselman Woods to Morgan Avenue. The general maintenance for that portion of the drain until it runs into Wesselman Woods should be maintained similar to the canal. Beginning in 2017 mowing occurred in the rip rap curve section just east of Stockwell Road. This continued in 2018 and will continue. In 2019 it was also recommended that this area be sprayed. On the West side of Stockwell, the mowing would actually be on the north side of the ditch as the canal flows under the tracks just east of Stockwell Road. For 2018 additional mowing footage was added for that portion west of Stockwell on the north side of the ditch until it enters Wesselman Woods (approximately 200'). The East Side Drainage Project being done by the City of Evansville will affect this drain from the

intersection of the railroad on the West side of Stockwell and going East to the end of the J.H. Rudolph property. This project is going to reopen the original channel of the Canal that has not been maintained since 2005 when the ditch was re-routed to the North. It will add about 600' of additional area of maintenance for 2025. According to the design, the amount of maintenance needed should actually be less than before with the type of materials and vegetation being proposed for this design. After construction is completed, we will know more about exactly what type of maintenance is going to be required.



Examples of rip rap blockages and debris at various points along the channel



Blockage at North Pipe at Green River Rd Area west of Stockwell additional mowing



Canal and Harper Ditch junction



Wabash Erie Canal bank destabilization-Picture from Northern Bank



Canal west of Green River Road

Some fallen trees on that portion of the drain west of Stockwell Road are partially blocking the channel and will need to be cleared in the future. Some of the blockage is located on the drain within Wesselman Woods Nature Preserve. Removal of these blockages will be coordinated with personnel from Wesselman and IDNR.



Blockages in stream within Stockwell Woods

Also, some build-up of material is occurring under Morgan Avenue. There are some additional small blockages north of Morgan Avenue, but these are at a considerably lower grade than the channel on the South side of Morgan. This is due the location of a waterline on the south side of Morgan Avenue that effectively sets the grade for this channel from Morgan Avenue to the south. In the future, it may be prudent to investigate the potential for extending the legal drain limits to where the drain flows into Pigeon

Creek. Additional consideration should be given as to whether the waterline on the south side of Morgan Avenue should be lowered.



Channel north of Morgan Avenue-not a part of the legal drain system

Two large 96” steel storm water pipes were installed under the NS Railroad, just east of Stockwell Road in 2004. The more eastern of the two pipes has some siltation affecting less than 25% of the capacity of the pipe. This material should be removed. By contract with the NS RR, Vanderburgh County is responsible for the maintenance of these structures. Continued efforts will be made in order to work with the NS on this project.



Norfolk Southern Railroad Crossing over Wabash Erie Canal – January 2023

Harper Drain is connected with ESU-S½ and drains most of the heavily developed area east of Stockwell Road, north of Lincoln Avenue, south of Morgan Avenue, and west of Fielding Court. Harper Drain, however, is maintained with a separate account due to its construction after completion of ESU Drain. The drain begins on the North side of the Lloyd Expressway near Cullen Avenue (east of Green River Road) and proceeds north

along the East line of Normandy Arms Apartments and then turns west along the line between Normandy Arms and Carriage House to Eastland Place Shopping Center. At that point the drain proceeds through a pipe under Eastland Place Shopping Center, northwesterly under the parking lot of Macy's and then under Vogel Road in front of German American Bank Building and turning north and running under Newton Avenue before discharging into the Wabash Erie Canal. During 2018 this drain was sprayed for broadleaf and brush and bottom sterilization as well as being mowed three times.

In 2014, concern expressed from Carriage House Apartments as to whether the piped portion of the drain was working at capacity led to an inspection of the approximately 0.7-mile piped portion of the drain. The piping was found to be in good shape with relatively no problems. It is recommended that this pipe be inspected again in 2024.

Recommendations are to continue scheduled maintenance and assuming normal rainfall, increase the frequency of the mowing to three times per year. It is also recommended that the portion that is piped be inspected on a regular basis (every 10-15 years) going forward with cameras to ensure that the integrity of the structures is maintained and no large debris exists in the pipes. Due to complaints of flooding south of the Lloyd Expressway the open drain was cleaned out in 2016 from just north of the Lloyd Expressway to Virginia Street.

Harper Drain will be billed in 2024, and we are going to pursue adding this drain to the ESU South ½ system.



Harper Ditch east of Eastland Shopping Complex

Stockfleth is a south to north drain approximately 1/4 mile west of Burkhardt Road that begins on the north side of the Lloyd Expressway to the Hirsch Drain/Crawford-Brandeis Drain intersection at Morgan Avenue (the old Wabash Erie Canal). Work in 2021 consisted of spraying for broadleaf weeds and brush, bottom sterilization and a midsummer and fall mowing. A significant infestation of cattails has been previously reported in Stockfleth Drain north of Vogel Road, however increasing the mowing cycle has made this less of a problem. One permit was issued in 2022 to allow a pipe to discharge into the ditch for a new commercial development near Virginia and Metro Drive. In 2022, there was also an illegal crossing of the ditch by a utility contractor that has not been resolved.

Nurrenbern is a south to north drain approximately 1/2 mile west of Warrick County Line that begins at Lincoln Avenue and Fuquay Road goes under the Lloyd Expressway and I-164 to Kelly Ditch (the old Wabash Erie Canal). In 2016 the channel was cleared at the pipes at Oak Grove Road.

This ditch is basically in good condition and it is recommended that the current application of herbicides continue and mowing south of the Lloyd continue. For 2023, mowing north of the Lloyd Expressway to the Northwest corner of the Cross Lake Apartment Complex is recommended to be continued including a second mowing that

was added in 2018. In 2018 additional mowing was added for the area from Oak Grove Road north to where the ditch intersects Kelly ditch. A second mowing in late fall was instituted in 2019.



Nurrenbern Ditch north of Virginia



Nurrenbern Ditch south of Virginia

Crawford Brandeis Extension is one of two drains in the East Side Urban North area. The drain begins on the North side of Morgan Avenue about 1/4-mile West of Burkhardt Road proceeds under Old Boonville Highway at the Eagles Lodge and continuing north under Lynch and Hirsch Roads and continuing north to Pigeon Creek. Maintenance in 2021 consisted of a broadleaf and brush spraying and a fall mowing from Morgan Avenue north to Old Boonville Highway and a midsummer and fall mow from Old Boonville Highway to the Northeast corner of the Evansville Basketball Academy parcel.

The bank on the west and north sides of the drain needs to be pulled back in an area south of Lynch Road to the south line of the Burkhardt Addition Subdivision. An obstacle to completing this work will be accessing the west bank of the stream with equipment. Previous conversations had been held with the land owner/owner of the bridge and he seemed amenable to allowing use of the bridge for small equipment. However, in 2017 when attempts were made to do this work, the property owner was uncomfortable with the legal language provided in the County's agreement. This area has still not been resolved as of the end of 2023. We have also received numerous complaints regarding the condition of the basin that lies on the North side of Burkhardt Addition from the adjoining landowners in the subdivision.



To the north in the area south of Hirsch Road a single heavy mowing/small tree clearing was done in 2016 from Hirsch Road south approximately 2100' on both sides of the top

of the channel. An application to affect was granted to Centerpoint Energy in 2023 to allow them to route a gas line under the intersection with Boesche Drain.

Boesche Drain begins west of the intersection of Burkhardt Road and Hirsch Road and proceeds East under Burkhardt Road, I-69, Old Boonville Highway, and to the Warrick/Vanderburgh County Line. During 2016 this drain, along with Crawford Brandeis Extension, was sprayed for broadleaf and brush. In 2016 this drain was selective dipped from Burkhardt to I-69. An application to affect was granted to Centerpoint Energy in 2023 to allow them to route a gas line under the intersection with Crawford-Brandeis Drain. An application to affect was also granted to Centerpoint Energy to allow them to open cut a portion of Boesche Drain just east of I-69. While we do not normally allow any open cuts on a regulated drain, extenuating circumstances make this necessary for this pipe extension. Centerpoint is taking great care to ensure the integrity of the drain and maintain the water flow while performing their work. The timeframe is very short for this and the drain will be returned to normal conditions upon completion. The County Surveyor's Office will also be doing daily inspections of this process until completion.

Multicounty Drainage

Weinshiemer/Williams Ditch this drain is known in Vanderburgh County as Weinshiemer but goes by the name of Howard Williams in Warrick County. The drain begins at Lincoln Avenue and proceeds north along the Vanderburgh/Warrick County line. Just south of the I-69 interchange with the Lloyd Expressway the drain flows under I-69 to the Northeast to the Deaconess Hospital complex and then under the Lloyd Expressway, all in Warrick County. The drain then proceeds to the north and northeast to Stevenson. Currently the county assesses 240.87 acres of watershed, all within the city limits of Evansville. Monies that are collected are for any work that may be billed by Warrick County as they maintain this ditch.

Upper Pigeon Creek

Taxing continues on this area and, like Weinshiemer Ditch in Warrick County, payments are made to Gibson County based upon work performed. The last payment to Gibson County was made in 2005.

Major Issues

There are two major issues affecting Vanderburgh County Drains. The first is the continued attempts to encroach on the Right of Entry of the legal drains. The Right of

Entry, though sometimes erroneously referred as the Drainage Easement or Drainage Right-of-Way is defined Indiana Code 36-9-27-33 a portion of which is listed below:

Sec. 33. (a) The county surveyor, the board, or an authorized representative of the surveyor or the board acting under this chapter has the right of entry over and upon land lying within seventy-five (75) feet of any regulated drain. The seventy-five (75) foot limit shall be measured at right angles to:

- (1) the center line of any tiled drain; and
 - (2) the top edge of each bank of an open drain;
- as determined by the surveyor.

(b) Spoil bank spreading resulting from the construction, reconstruction, or maintenance of an open drain may extend beyond the seventy-five (75) foot right-of-way if:

- (1) the county surveyor finds that the extension is necessary; and
- (2) the extension has been provided for in the engineer's report on the construction, reconstruction, or maintenance.

(c) All persons exercising the right given by this section shall, to the extent possible, use due care to avoid damage to crops, fences, buildings, and other structures outside of the right-of-way, and to

crops and approved structures inside the right-of-way. The county surveyor shall give oral or written notice of the entry on the land to the property owner of record, and in the case of a municipality, to the executive of that municipality. The notice must state the purpose for the entry.

(d) The owners of land over which the right-of-way runs may use the land in any manner consistent with this chapter and the proper operation of the drain. Permanent structures may not be placed on any right-of-way without the written consent of the board. Temporary structures may be placed upon or over the right-of-way without the written consent of the board, but shall be removed immediately by the owner when so ordered by the board or by the county surveyor. Crops grown on a right-of-way are at the risk of the owner, and, if necessary in the reconstruction or maintenance of the drain, may be damaged without liability on the part of the surveyor, the board, or their representatives. Trees, shrubs, and woody vegetation may not be planted in the right-of-way without the written consent of the board, and trees and shrubs may be removed by the surveyor if necessary to the proper operation or maintenance of the drain.

(e) This subsection applies to new regulated drains established after September 1, 1984, and to urban drains. Except as provided in subsection (f), the board may reduce the seventy-five (75) foot right-of-way requirement of subsections (a) and (b) to any distance of not less than:

- (1) twenty-five (25) feet from the top of each bank of an open ditch; and
- (2) fifteen (15) feet from the center line of any tiled drain; as measured at right angles.

The encroachment issue is especially a problem on the east side where poor due diligence by some developers has caused them to overlook the Right of Entry for the Crawford Brandeis drain and lay out their development into this area. The problem has been exasperated in recent years with the development of increasing cell service and the desire by cell companies to use the open space on the east side of Burkhardt Road that is the Right of Entry for the piped Crawford Brandeis drain.



Green Space between Burkhardt Road and businesses is Right of Entry for Crawford Brandeis pipe drain

The second issue is the lack of utilities in obtaining proper crossing authority and their desire to perform minimum coverage for utilities that go under drains. This problem has been highlighted by Evansville Water and Sewer with the desire to place gravity sewers too close to recommended cover. An ordinance has been developed by the previous Vanderburgh County Surveyor, Jeff Mueller. The intent of the Vanderburgh County Surveyor's Office going forward is to continue the work of Mr. Mueller and bring this ordinance to the Drainage Board for approval. This ordinance would require an application for utilities to cross any regulated drain, and will call for a minimum of three feet of cover for buried utilities.

Current Balance, Past Costs & Billing Recommendations - Vanderburgh County Regulated Drains

Ditch Name	Account Balance 12/31/2023	Projected Balance After 2023 Contractuals Deducted	2024 Estimated Costs	4 YEAR COST AVERAGE	4 YEAR COST TOTAL	2023 Contractual Costs	2022 Contractual Costs	2021 Contractual Costs	2020 Contractual Costs
Alien	\$ 44,372.84	\$ 44,333.84	\$ 4,000.00	\$ 3,247.26	\$ 12,989.04	\$ 3,360.84	\$ 3,406.92	\$ 3,198.30	\$ 3,022.98
Eagle Slough	\$ 60,576.20	\$ 60,102.63	\$ 7,500.00	\$ 6,457.60	\$ 25,830.40	\$ 5,527.36	\$ 7,027.36	\$ 5,887.84	\$ 7,387.84
Kell	\$ 47,114.98	\$ 47,084.65	\$ 1,000.00	\$ 882.43	\$ 3,529.70	\$ 1,012.40	\$ 882.80	\$ 795.65	\$ 838.85
Iceb	\$ 18,299.30	\$ 18,299.30	\$ 7,000.00	\$ 5,369.71	\$ 21,478.85	\$ 6,845.69	\$ 5,435.08	\$ 4,282.29	\$ 4,915.79
Sommit Stevens	\$ 86,054.86	\$ 85,990.64	\$ 17,000.00	\$ 3,357.90	\$ 13,431.60	\$ 16,458.95	\$ 13,435.35	\$ 12,008.13	\$ 13,431.60
East Side Urban*	\$ 498,095.96	\$ 497,604.89	\$ 60,000.00	\$ 39,053.83	\$ 156,215.31	\$ 38,084.75	\$ 37,463.43	\$ 49,429.26	\$ 31,267.87
Harper	\$ 19,098.15	\$ 19,098.15	\$ 7,800.00	\$ 4,115.75	\$ 16,463.00	\$ 4,783.75	\$ 4,807.75	\$ 2,831.85	\$ 4,039.65
Henry	\$ 9,312.11	\$ 9,070.81	\$ 2,500.00	\$ 2,152.87	\$ 8,611.47	\$ 2,830.56	\$ 2,356.08	\$ 1,633.61	\$ 1,791.22
BaerH	\$ 156.68	\$ (6.68)	\$ 1,200.00	\$ 2,326.80	\$ 9,307.20	\$ 1,102.40	\$ 6,000.00	\$ 1,102.40	\$ 1,102.40
Barr's Creek	\$ 17,092.50	\$ 16,453.27	\$ 5,000.00	\$ 4,761.53	\$ 19,046.12	\$ 4,261.53	\$ 4,261.53	\$ 4,261.53	\$ 6,261.53
Buente Upper Big Creek	\$ 3,111.01	\$ 2,505.16	\$ 3,500.00	\$ 4,039.00	\$ 16,156.00	\$ 4,039.00	\$ 4,039.00	\$ 4,039.00	\$ 4,039.00
Hoefling	\$ 2,761.38	\$ 2,261.38	\$ 600.00	\$ 557.10	\$ 2,228.40	\$ 557.10	\$ 557.10	\$ 557.10	\$ 557.10
Kreer	\$ 857.10	\$ 795.54	\$ 500.00	\$ 410.40	\$ 1,641.60	\$ 410.40	\$ 410.40	\$ 410.40	\$ 410.40
Maasberg	\$ 650.48	\$ 617.39	\$ 300.00	\$ 220.60	\$ 882.40	\$ 220.60	\$ 220.60	\$ 220.60	\$ 220.60
Maddock	\$ 17,600.36	\$ 17,124.24	\$ 5,500.00	\$ 5,824.70	\$ 23,298.78	\$ 3,174.07	\$ 3,174.07	\$ 3,174.07	\$ 3,174.07
Pond Flat Main	\$ 7,036.66	\$ 6,207.49	\$ 6,500.00	\$ 15,242.60	\$ 60,970.40	\$ 5,527.80	\$ 18,400.00	\$ 5,527.80	\$ 31,514.80
Lateral A	\$ 8,722.20	\$ 8,722.20	\$ 1,500.00	\$ 743.54	\$ 2,974.16	\$ 743.54	\$ 743.54	\$ 743.54	\$ 743.54
Lateral B	\$ 3,393.57	\$ 3,393.57	\$ 1,000.00	\$ 391.58	\$ 1,566.32	\$ 391.58	\$ 391.58	\$ 391.58	\$ 391.58
Lateral D	\$ 5,390.72	\$ 5,390.72	\$ 1,200.00	\$ 766.06	\$ 3,064.24	\$ 741.06	\$ 641.06	\$ 1,041.06	\$ 641.06
Reeling	\$ 5,278.86	\$ 4,971.13	\$ 2,100.00	\$ 2,051.52	\$ 8,206.08	\$ 2,051.52	\$ 2,051.52	\$ 2,051.52	\$ 2,051.52
Singer	\$ 2,817.60	\$ 2,762.47	\$ 450.00	\$ 367.50	\$ 1,470.00	\$ 367.50	\$ 367.50	\$ 367.50	\$ 367.50
Wallenmeyer	\$ 451.91	\$ 263.92	\$ 1,500.00	\$ 1,253.25	\$ 5,013.00	\$ 1,253.25	\$ 1,253.25	\$ 1,253.25	\$ 1,253.25
Barnett	\$ 2,862.84	\$ 2,542.80	\$ 600.00	\$ 911.26	\$ 3,645.05	\$ 2,269.32	\$ 417.90	\$ 417.90	\$ 539.93
Cypress Dale Maddox	\$ 5,947.11	\$ 5,044.05	\$ 1,600.00	\$ 2,595.96	\$ 10,383.84	\$ 6,421.51	\$ 1,194.35	\$ 1,194.35	\$ 1,573.63
Edmond	\$ 4,809.02	\$ 4,725.90	\$ 1,800.00	\$ 2,579.45	\$ 10,317.81	\$ 873.33	\$ 769.75	\$ 6,927.75	\$ 1,746.98
Heffrich Happe	\$ 1,894.56	\$ 1,789.80	\$ 4,200.00	\$ 682.52	\$ 2,730.07	\$ 698.39	\$ 634.90	\$ 634.90	\$ 761.88
Kamp	\$ 1,931.19	\$ 1,839.12	\$ 3,800.00	\$ 599.85	\$ 2,399.40	\$ 613.80	\$ 558.00	\$ 558.00	\$ 669.60
Total	\$ 875,140.15	\$ 868,986.38	\$ 149,650.00	\$ 110,962.56	\$ 443,850.24	\$ 114,592.00	\$ 120,900.82	\$ 114,941.18	\$ 135,318.67

Schlesker	\$ 794.79
Upper Pigeon Creek	\$ 8,262.38
Weinsheimer	\$ 17,530.49

The rates for 2024 are being processed as of January 9, 2024 and will be presented at the January 23, 2024 meeting.

The attached report duly submitted by the Vanderburgh County Surveyor to the Vanderburgh County Drainage Board on January 24, 2023.

Linda Freeman, Vanderburgh County Surveyor