



## MEMORANDUM

**TO:** House Committee for Local Government & Municipal Finance  
**FROM:** Michigan Association of County Drain Commissioners  
**DATE:** May 27, 2020  
**RE:** HB 5060

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Pursuant to Section 196 of the Michigan Drain Code ("Drain Code"), Drain Commissioners are limited in the amount of maintenance work they can perform on a single drain in a year. MCL 280.196. House Bill 5060 proposes to raise the current maintenance dollar limitation from \$5,000 per mile per year to \$10,000 per mile per year. The current maintenance limit of \$5,000 places stringent constraints on what a Drain Commissioner can do to perform maintenance on existing drainage systems each year. Whether the existing drainage system is an open channel ditch/watercourse or an enclosed underground system, much of the necessary maintenance of current drainage infrastructure across the State cannot be efficiently performed under the current maintenance limit. This memorandum will outline why the \$5,000 per mile per year limitation ("\$5,000 limit") often falls short and will provide examples from multiple counties as evidence. Additional documentation of these examples and other examples can be provided upon request.

### Open Channel Systems

Many existing drains are open channel systems that date back to the late 1800's or early 1900's. Systems of that age require significant maintenance work to preserve their functionality. Under the current \$5,000 limit, to complete a clean out of a 1-mile of drain, the cost per unit would be limited to \$0.95 per foot or less. As demonstrated below, the cost to clean out an open ditch can easily range between \$5 to \$20 per foot. At a unit price of \$10 per foot, a Drain Commissioner can only clean out approximately 500 feet of a 1-mile open channel drain, which is less than 10% of the drain. Accordingly, to clean out a 1-mile drain at a cost of \$10 per foot, it would take 10 years under the current \$5,000 limit. If access concerns or increased tree/brush removal is required, the price per foot increases to approximately \$20 per foot for 1-mile drain.

The following are examples of recent open channel drain projects:

- **Verne Drain (*Saginaw County*)**
  - 4 miles - \$20,000 per year maintenance limit
  - Bid for drain clean out including open channel excavation, tree clearing and grubbing, culvert clean out, traffic control, and restoration came in at approximately \$30,000, which is \$10,000 above current annual limit.
  - Under current \$5,000 limit, work would need to be performed over 2 years.

- **Yanger Drain (*Saginaw County*)**
  - 1.1 Miles - \$10,000 per year maintenance limit
  - Bid for drain clean out including open channel excavation, tree clearing and grubbing, culvert clean out, traffic control, and restoration came in at approximately \$28,000, which is \$18,000 above current annual limit.
  
- **Belle River Intercounty Drain (*St. Clair & Lapeer Counties*)**
  - 15 miles - \$75,000 per year maintenance limit
  - In 2009, the drain was inspected and found to be in fair condition with recommendations for brush removal and light sediment removal as maintenance of the drain. Because costs associated with these activities were above the annual maintenance limitations, the recommended maintenance was tabled.
  - In 2015, continued degradation and loss of capacity of the drain caused the Board to start incremental yearly maintenance. However, 6 years into the program less than 50% of the necessary maintenance is complete and recommended maintenance has been cut from the program to satisfy the \$5,000 limit.
  
- **Schmidt Intercounty Drain (*Bay & Saginaw Counties*)**
  - 1.4 Miles - \$10,000 per year maintenance limit
  - Average bid for drain clean out including open channel excavation, tree clearing and grubbing, culvert clean out and maintenance, and restoration was approximately \$41,250, which is \$31,250 above current annual limit.

### **Enclosed and Mixed Drainage Systems**

Enclosed drainage systems typically consist of underground pipe and/or tile, along with various manhole, catch basin and inlet structures. The cost to maintain an enclosed system varies greatly based on the size of the pipe, depth of the infrastructure, and access to the drainage infrastructure. Enclosed systems can be anything from a farm tile to a commercial or residential storm sewer or sanitary system. Based on examples we received, maintenance work on an enclosed or partially enclosed drainage system can range between \$9,193 to per mile to \$37,963 per mile.

The following are examples of recent enclosed drain maintenance:

- **#405 Drain (*Gratiot County*)**
  - 2.24 miles - \$15,000 per year maintenance limit
  - Enclosed system in Lafayette Township. The majority of the drainage system required maintenance work.
  - Cost estimates placed the work at roughly \$85,000, which amounts to \$37,963 per mile or \$7.19 per foot. If completed in phases, it would have taken at least 6 years to complete the work.

- **Eau Claire Village Drain (*Berrien County*)**
  - 1.8 Miles - \$10,000 per year maintenance limit
  - Agricultural and village tile drainage system.
  - Necessary work included excavation and drain tile repair. Costs associated with construction of the maintenance totaled approximately \$75,000. A resolution to exceed the \$5,000 limit was necessary.
- **#A31 Drain (*Berrien County*)**
  - Less than 1 mile - \$5,000 per year maintenance limit
  - Enclosed subdivision system that experienced a sinkhole under a road.
  - Necessary work included excavation, dewatering, pipe repair, and road restoration. Costs associated with construction of the maintenance totaled approximately \$23,000. This work could not be completed in multiple years as it was a single fix. A resolution to exceed the \$5,000 limit was necessary.



# Saginaw County

Drain Name	Assessable Miles	Maintenance Limit	Bid Amount	% Of Limit
Nerreter & Cole	5	\$30,000.00	\$59,217.00	197%
Mershon Br. of Shattuck	1	\$5,000.00	\$24,532.00	491%
Parker & Day	2	\$10,000.00	\$26,736.00	267%
Schmidt IC	2	\$10,000.00	\$20,669.00	207%
Verne	4	\$20,000.00	\$30,130.00	151%
Yanger	2	\$10,000.00	\$27,945.00	279%
Kochville & Branches	6	\$30,000.00	\$41,103.00	137%
Watercourse	5	\$25,000.00	\$59,072.00	236%
Burns	3	\$15,000.00	\$28,666.00	191%

# Lapeer County

## Lapeer County

LAPEER COUNTY DRAIN COMMISSIONER PROJECTS EXCEEDING \$5K/MILE STATUTORY ANNUAL LIMITS FOR MAINTENANCE ACTION			
DRAIN NAME	LENGTH OF DRAIN (MILES)	ANNUAL CONSTRUCTION COST LIMIT	COMMENTS
BELLE RIVER IC DRAIN	14.9	\$75,000	The Belle River IC Drain was constructed in 1986. The drain was surveyed and evaluated in 2009 as fair condition with recommendations to conduct a program of vegetation management and light sediment removal to preserve the drain and limit damages from annual runoff events. The Intercounty Board reviewed the recommendations and concluded that the cost of maintenance of the facility which drain more than 105 square miles of watershed would be too high for annual maintenance. Only one township in St. Clair County is responsible for over 20% of the assessment costs. This township was unwilling in 2009 to resolve for exceeding the annual limit to accelerate the program. The board at that time judged that the tasks were too large take on and tabled the recommended program. After landowners and board member began to see advancing degradation of the facility and continued loss of capacity in the drain, the matter was taken up again in 2015. This time the board continued with the recommended program, but as costs had increased the planned maintenance program was continually curtailed due to budget restraints. Six years into the program, the planned maintenance is still less than 50% complete. Costs continue to climb and multiple recommended items of needed maintenance have been dropped from the program to satisfy budget constraints.
BEYER DRAIN	0.2	\$5,000	Beyer Drain was damaged during KWA water project without compensation from the authority. It is comprised of a road ditch connecting a County Road intersection to its outlet. Repairs were conducted on an emergency basis and needed costs have been, assessed over two years. The small district of 32.2 acres, county and township have absorbed the costs, but needed maintenance has been delayed until budgetary limits are reset.
BLACK RIVER IC DRAIN	24.2	\$125,000	The Black River Intercounty Drain was re-constructed in 1986-88 to a previous design. The Intercounty Board reviewed recent recommendations and has concluded that the cost of maintenance of the facility which drain more than 430 square miles of watershed would be too high for annual maintenance. No townships in the Drain District is responsible for over 20% of the assessment costs. Several maintenance projects have been undertaken to preserve the facility, however, budgetary constraints have limited the ability of the Intercounty Drain Board to approach maintenance of the facility in a system wide manner. A 2009 project stabilized the stream grades, but vegetation management and sediment removal items have been neglected because of the budget constraints. Because of the size of the channel, maintenance costs are relatively high and cause the annual \$5K per mile budgets to be expended in very short reaches. The efforts of the Drain Board as scheduled under the current limits projects out to take approximately 12 years to complete given the current costs. This approach will fail as the necessary work is considered to be prescriptive of current degradation and requires systematic maintenance operations to follow on the recommended work tasks.
PATON DRAIN	3.6	\$20,000	The Paton Drain Maintenance Project was begun in 2016 to complete clearing operations of the lower reach of the drain where recently constructed homes complained of flooding due to woody debris jams. As the project finished, upstream property owners demanded that the entire facility undergo maintenance to clear away log jams, beaver dams and remove accumulated sediment in the drain to bring the drain function back to design capabilities. The 2,100 acre district has been undergoing phase maintenance since 2016. Upstream landowners continue to demand maintenance work and complain that they are receiving assessments while they continue to wait for relief. The single township that contains the district has not resolved to exceed maintenance limits to date.
S. BRANCH OF THE CASS RIVER INTERCOUNTY DRAIN	27.3	\$140,000	The South Branch of the Cass River Intercounty Drain was completed as part of a federal flood control program in 1964. Various maintenance projects have been conducted in small reaches over decades to preserve the function of the facility. Recent 2016 survey and evaluation of the facility indicated that severe degradation of erosion control structures has burdened the system with erosion and consequent sedimentation. The Intercounty Board reviewed recent recommendations and has concluded that the cost of maintenance of the facility which drains approximately 140 square miles of watershed would be too high to be completed as annual maintenance. No townships in the Drain District is responsible for over 20% of the assessment costs. A program of annual maintenance phasing has been undertaken to address the most severe problems in each scoped reach. Now in the fourth year of the program, less than 50% of the work is complete. It is expected that those areas left untouched in the previous project reach have less than 5 years of additional useful functioning life left. Originally scheduled to be completed in four years, rising construction costs now appear to be extending the planned maintenance program another four years.
WILSON, HODGE AND SLATTERY DRAIN	4.6	\$25,000	The Wilson, Hodge and Slattery Drain underwent maintenance of the lower reaches in 2014. Emergency repairs of eroded banks was undertaken in response to landowner complaints with the project expanded by change order due to additional landowner requests for damage mitigation by adjacent landowners. MDEQ had cited a landowner for illegal activities and requested repairs to the drain be accomplished by the project. Subsequent to a survey, the Drain Commissioner informed the road commission of scour erosion downstream of a road bridge. Once notified, the Lapeer County Road Commission demanded that the Drain District repair the scour erosion at no cost to the road commission. While willing to assist the road commission with the pre-existing condition, the district could not comply due to maintenance limits taken up by other added priorities. The single township with significant land area in the district did not resolve to exceed maintenance limits. The 3,800 acre district was not burdened by the costs, just limited in its ability to respond to demands of the district landowners. Given the subsequent tension with the road commission, MDEQ and landowners, additional maintenance operations were suspended until relationships could be mended.



# Berrien County

**EAU CLAIRE VILLAGE DRAIN #142**  
**BERRIEN AND PIPESTONE TOWNSHIPS & EAU CLAIRE VILLAGE**  
**Resolution Meeting**  
**April 15, 2019**  
**Eau Claire Village**

The Eau Claire Village Drain #142 was established in 1896 and is a tiled drain that runs from north of Main Street/M-62 east of M-140, traveling westward north and south of Main Street out-letting into the Eau Claire Drain #141 which is north of Main Street and on the west side of Old Pipestone Road. The drain's drainage district boundaries were reviewed on August 27, 2014 and is current to today's use. See District Map

The drain is not performing and causing large amounts of water to accumulate onto the Klug lands at 7025 Main Street and is often referred to as the "Klug Lake". The water is causing losses to both Klug and Ferry Farms. See pictures of "Klug Lake"

The drain tile/pipe needs to be repaired from 7095 Main Street to the east side of the Ferry parcel, approximately 1350 feet. Ferry Excavating will be performing the work. Estimated costs for the construction is \$75,000.00. A contractor's bid is in progress. The project will need to be financed, the fee is \$1,500.00. Contingency of approximately 15% is also added for a total of \$91,500.00. See Computation of Costs.

The maintenance needed on the drain exceeds the \$5,000.00 per mile per year spending limit. Per the 1956 Michigan Drain Code, we must have a resolution to be able to continue with the maintenance project. The Drain Commissioner is requesting the board to pass a resolution to exceed the spending limit.

The charges will be assessed to the Eau Claire Village Drain's Drainage District and will be spread out four (4) years to try and alleviate some of the tax burden. See Assessment rolls, one for the entire costs, and one showing the four (4) year payment plan.



**COUNTY OF BERRIEN  
OFFICE OF THE DRAIN COMMISSIONER  
CHRISTOPHER J. QUATTRIN**

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**HERITAGE DRAIN #A31  
LINCOLN CHARTER TOWNSHIP  
BOARD MEETING FOR RESOLUTION  
OCTOBER 8, 2019**

Drain History and Work Breakdown

The Heritage Drain #A31 is a subdivision drain located in Lincoln Charter Township west of Holden Road south of Stevensville/Baroda Rd. The drain was built in 2003 to service the Heritage Subdivision that was developed by Donald Kamp who then completed a "Take Over" Agreement with the Berrien County Drain Commissioner in January of 2004. The agreement gave the Drain Commissioner jurisdiction to maintain the structure in the future. The drain's district boundary was reviewed through Part 197 of the Michigan Drain Code on May 20, 2015 to bring the district current to today's usage. See district map.

Our office was alerted to a problems with the Heritage A31 drain which included a sinkhole in the center of the road on Franklin Street (location "A") see location map. After inspection and review, it was determined that dirt was coming into the pipe at a lateral location, approximately 100 feet away from the manhole causing a sinkhole. The pipe is located below the water table and digging will exceed 13 feet. Work will be required to dewater, repair the pipe and restore the road. A second location on Jefferson Drive (location "B") another sinkhole has developed and will require repairs that include a small amount of dewatering, cutting the road and mudding the pipe to seal it. Roads will be patched once work is completed.

The work will be performed by B & Z Company who gave a quote for the costs of the work which is approximately \$20,000 for location "A" on Franklin Street, and \$3,000.00 for the repairs on Franklin Drive. The time to complete the work is expected to be one week and road closures will be required due to the dewatering and depth of the pipe. See quote.

Engineering fees will be approximately \$4,600.00 for road closures and working around or within utility easements. Financing will be \$1,500.00. Contingency of 15% will be added which is \$4,365.00 bringing a total of \$33,465.00. See Computation of Costs.

The costs will be spread out three (3) years to alleviate the tax burden. The assessments will not start until Winter 2020. Assessment rolls for the entire costs and the first payment of three (3) are attached for review. See assessment rolls.

The costs of the repairs exceed the annual spending limit set by the Michigan Drain Code of 1956. The Drain Commission is requesting the board to approve a resolution to exceed the spending limit. See Resolution.

Oakland County

Estimated Annual Maintenance Costs

Enclosed Drain. Some flood control features. Suburban land use. Total Length = 50,109 (10 miles)  
 Prepared by GW 3/16/2020

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 Eng/Inspection - 196(4)

Enclosed Storm Drain

Maintenance Type	Estimated Unit Rate	Unit	Frequency	Annual Cost per Ft of Enclosed Storm Drain	Total Footage	Annual Maintenance Cost
Cleaning *	4.73	\$/ft	10	\$0.47	50,109	\$23,705.41
Pipe Patching	10.00	"	40	\$0.25	50,109	\$12,527.25
Joint Grouting	16.67	"	40	\$0.42	50,109	\$20,878.75

\*Assumes cleaning performed at same time as CCTV inspection

Drainage Structures (Manhole, Catch Basin, Inlets)

Maintenance Type	Estimated Unit Rate	Unit	Frequency	Annual Cost Per Structure	Total Number of Structures	Annual Maintenance Cost
Plaster	50.00	\$/ Structure	6	\$8.33	520	\$4,333.33
Cut-out and Block Work **	2,000.00	"	40	\$50.00	520	\$26,000.00
Sump Cleaning	100.00	"	6	\$16.67	269	\$4,483.33

\*\* A capital expenditure is needed every 40 years to replace the structure. See Assets sheet. This assumes a "half replacement" is performed after 20 years. Due to the full replacement, the frequency of this maintenance is assumed one per asset life (40 years)

Detention Basins

Maintenance Type	Estimated Unit Rate	Unit	Frequency	Annual Cost per Basin	Total Number of Basins	Annual Maintenance Cost
Mowing and Trimming	\$200.00	\$/basin	1	\$200.00	8	\$1,600.00
Outlet Pipes and Structure Cleaning	\$1,000.00	"	20	\$50.00	8	\$400.00

Bioswales (small)

Maintenance Type	Estimated Unit Rate	Unit	Frequency	Annual cost per Bioswale	Total number of Bioswales	Annual Maintenance Cost
Pruning, Weeding, Mulching	\$500.00	\$/Bioswale	1	\$500.00	2	\$1,000.00
Replacing Filter Media	\$2,000.00	"	5	\$400.00	2	\$800.00
Outlet Pipes and Structure Cleaning	\$1,000.00	"	10	\$100.00	2	\$200.00

MS4 Requirements Overhead

\$1,200.00
\$3,000.00

Total Annual Maintenance Estimate \$100,128.08

Total Annual Maintenance Estimate (196(12) only) \$4,000.00

Total Annual MS4 and Overhead \$4,200.00

Total Miles of Drain 10

Required 196 (12) + MS4 and Overhead Assessment (per mile of drain) **\$820.00**

Total Annual Maintenance Estimate (196(11) only) \$91,928.08

Total Miles of Drain 10

Required 196 (11) Assessment (per mile of drain) **\$9,192.81**

