

# TILE DRAINAGE MUNICIPAL BY-LAW TEMPLATE

A step-by-step guide of considerations to assist municipalities in creating their own Tile Drainage By-Laws

*Created by the Red River Basin Commission*

*In Partnership with: Province of Manitoba, Assiniboine River Basin Initiative, Cooks Creek Conservation District, East Interlake Conservation District, La Salle Redboine Conservation District, Pembina Valley Conservation District, Seine-Rat River Conservation District and the RM of Dufferin*



# INTRODUCTION

## TILE DRAINAGE IN MANITOBA

Historically, drainage of excess water from the Manitoba landscape has played a major role in the establishment of agriculture and communities. Under both current and predicted future conditions, drainage is expected to remain vital to maintaining the productivity of farms and the protection of rural and urban infrastructure. Effectively and sustainably managing drainage is a complex challenge and shared responsibility that spans provincial and municipal governments, landowners, industry, and the public.

Tile drainage, also known as subsurface drainage, is a regulated practice of installing perforated pipes in the ground to remove excess water from the soil profile. A significant on-farm investment, a tile drainage system typically includes a number of smaller diameter lateral pipes emptying into an increasingly larger mainline pipe. The water in the pipes flows by gravity to the edge of an agricultural field where it is released by gravity or pumped to the surface drainage system, such as a ditch or municipal drain.

It is estimated that tile drainage has been installed on thousands of acres of agricultural land in Manitoba. However, this area currently represents a small proportion of agri-Manitoba. Agronomic benefits include increased warming and drying of soils in the spring allowing for earlier planting and increased yield potential, deepened rooting by crops, reduced soil compaction and increased yield reliability due to better nutrient use and uniform maturity.

The rise in tile installation in Manitoba in recent years has prompted questions regarding its effects on water and nutrient exports from watersheds. Although tile drainage can have many agricultural benefits, it may have implications for the environment and downstream landowners when implemented.

Subsurface drainage improvements will increase infiltration of water from rainfall and snowmelt into soil, redirecting water from the surface into the soil profile and root zone. While this change in hydrology may reduce soil and phosphorus loss through reduced surface runoff, it may increase transport from the field of soluble salts, nitrates and pesticides via the tile outlet. The installation of tile also commonly increases the total volume of water leaving the field (combined surface and subsurface drainage) though peak flow may be reduced. If not carefully planned and installed, perforated tile drainage lines may in rare cases intercept aquifers or layers of relatively high subsurface flow. Such situations would pose water quality and flow risks.

Detailed, site-specific data are used during the design phase of a project to identify potential complications and mitigate risks. Farmers, agronomists, installers and consulting professionals are encouraged to collect and share such information and collaborate on a design and installation that addresses any concerns about a tile drainage project. Manitoba-appropriate Beneficial Management Practices (BMPs) can optimize tile drainage systems and curtail potential impacts.

Local Conservation Districts<sup>1</sup> are an excellent source of knowledge and support for drainage and watershed concerns. The Province of Manitoba has 18 conservation districts, all of which are charged with implementing programs focused on watershed health. Four Conservation Districts in Manitoba also maintain provincial drains.

---

<sup>1</sup> Note: Conservation Districts may be referred to as Watershed Districts pending the passing of Bill 7, "The Sustainable Watersheds Act"

# ROLES AND RESPONSIBILITIES

## ROLES AND RESPONSIBILITIES OF PROVINCIAL GOVERNMENT

- The provincial government's main role is to regulate the practice via *The Water Rights Act* and the *Water Rights Regulation*. The provincial government is responsible for regulating the environmental aspects of drainage development.
- The provincial government also works with industry, municipalities and professionals to develop tools and share information that help producers implement tile drainage in both economically and environmentally sustainable ways.
- The provincial government supports research through direct funding, technical input and extension of results. The provincial government acknowledges the jurisdiction of municipalities by ensuring that municipal approval exists prior to the issuance of a provincial Water Rights Licence to a proponent.

## ROLES AND RESPONSIBILITIES OF MUNICIPAL GOVERNMENT

- As per *The Municipal Act* (item 232(l)),  
    "A council may pass by-laws for municipal purposes respecting the following matters:  
    h) Drains and drainage on private or public property"
- Municipal by-laws should focus on the municipal aspects of the development and should not be inconsistent with provincial legislation.
- The Municipality is responsible for enforcing its own by-laws.
- If a proposed outlet is within 2 miles of a municipal drain, this initiates the requirement for municipal approval.
- Application through the Municipality is not required for provincial or natural waterways.

# TILE DRAINAGE BY-LAW TEMPLATE

## PURPOSE

The Red River Basin Commission, Province of Manitoba, the Cooks Creek, East Interlake, La Salle Redboine, Pembina Valley, and Seine-Rat River Conservation Districts, the RM of Dufferin, and the Assiniboine River Basin Initiative have created this document to help guide municipalities in the creation of by-laws regarding tile drainage. For reference and further information, please see Page 16 of this document.

## BACKGROUND

In early 2017, the Red River Basin Commission, the Province of Manitoba, Cooks Creek, East Interlake, La Salle Redboine, Pembina Valley, and Seine-Rat River Conservation Districts, the RM of Dufferin and the Assiniboine River Basin Initiative hosted a series of four webinars regarding tile drainage, its impacts on the environment and watersheds, and the roles of municipalities. The responses from the webinar were positive leaving direction to the group to further assist municipalities and local governments by providing a template for a tile drainage by-law.

## HOW TO USE THIS TEMPLATE

This template is meant to be a guideline only. Using existing municipal by-laws as a guide, a list of considerations has been created. For each consideration, discussion points are given to initiate conversation among your council and to give further clarification on the consideration. An example of wording for the by-law is also provided for each consideration. Keep in mind the process between municipal and provincial approval varies between municipalities. After reviewing this document, you will have better knowledge of some of the factors that should be considered when designing the by-law for your own municipality.

## DEFINITIONS

- **Applicant:** Landowner specifically or, on the Landowner's behalf, an installer of tile project. A renter can apply for a tile drainage licence; however, the licence would be in the Landowner's name.
- **Corrugated plastic tubing:** Extruded plastic tubing with a corrugated wall and when perforated, used for subsurface drains. (ASABE<sup>2</sup>)
- **Drainage:** Process of removing surface or subsurface water from a soil profile or area. (ASABE)
- **Drainage Coefficient:** The rate at which water is to be removed from a drainage area, expressed as depth per day or flow rate per unit of area. (ASABE)
- **Point of adequate outlet:** Outlets for all drainage projects must be of adequate size and capacity to accommodate target drainage flows without compromising surrounding land or other drainage structures. Such flows are associated with the installed subsurface drainage network, not those resulting from flood events.
- **Professional/Certified Installer:** There are currently no standardized certifications for tile installers in Manitoba. It is highly recommended that the Applicant select a reputable, experienced installer for their tile drain project. It is recommended to consult professional engineers or designers on the proposed design of the drainage project.
- **Subsurface Drain:** Subsurface conduits used primarily to remove subsurface water from soil. Classifications of subsurface drains include pipe drains, tile drains, and blind drains. (ASABE)
- **Tile Drainage:** also known as subsurface drainage, is a regulated practice of installing perforated pipes in the ground to remove excess water from the soil profile. A tile drainage system typically includes a number of smaller diameter lateral pipes emptying into an increasingly larger mainline pipe. The water in the pipes flows by gravity to the edge of an agricultural field where it is released by gravity or pumped to the surface drainage system, such as a ditch or municipal drain. Historically, the term Tile Drainage referred to clay or concrete tiles laid in a trench. Today, subsurface drains are perforated plastic pipe installed below the soil surface. The modern corrugated perforated plastic tubing is still commonly referred to as "drain tile".
- **Water Control Works:** means any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that
  - a) temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, or
  - b) changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage; (Water Rights Act of Manitoba)

---

<sup>2</sup> ASABE - American Society of Agricultural and Biological Engineers, ASAE EP481 FEB03, Construction of Subsurface Drains In Humid Areas, 2003, <https://elibrary.asabe.org/toc.asp>

## PROCESS

It is important to create a clear process for applicants to follow, making the application process as simple and straight-forward as possible for the Applicant and the Municipality:

### Example:

**Step 1:** After obtaining estimates and consulting an installer, the Applicant submits an initial request in writing to the Municipality.

**Step 2:** The Municipality or municipal appointment reviews the initial request and provides feedback to the Applicant. This may or may not include a site visit to confirm the request. The municipality may also forward the application on to a Conservation District or similar third-party agency for comment. This does not mean that the project has been approved at this stage.

**Step 3:** The Applicant can revise their request once feedback is received. The Applicant then submits a final request being sure to submit all required information at this time to the Municipal Office or Municipal Appointment.

**Step 4:** The Municipality reviews the final request and approves or rejects.

**Step 5:** If the decision is approved, the Applicant or Municipality (depending on the municipal process) submits a resolution of approval along with a Provincial application (this is different from the municipal application) to the Province of Manitoba for the issuance of a licence.

**Step 6:** All regulatory approvals are in place. The Council may require copies of a Water Rights Licence to be submitted prior to the commencement of installation of tile drainage.

**Step 7:** The Project can begin.

**Step 8:** The Municipality may choose to monitor the installation as it proceeds, inspect it upon completion, or request an official “as constructed” installation plan from the installers upon completion of the project for municipal records.

**NOTE: ALL PROJECTS MUST RECEIVE APPROVAL FROM ALL RELEVANT LEVELS OF GOVERNMENT BEFORE CONSTRUCTION CAN BEGIN**

## CONSIDERATIONS

The following are some considerations you may want to contemplate when designing your tile drainage by-law. These are suggestions only and your organization can choose to use them as they wish.

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>1. A. Consider designating a point-person within the Municipality who will accept the application and assess it prior to bringing it to Council for resolution of approval. Whom should the initial requests be brought to? Do the initial requests need to be in writing?</b></p>	<ul style="list-style-type: none"> <li>• Municipality could designate the Municipal Office, a specific councillor, the council as a whole, the Municipal Foreman, or planning district to assess the project prior to bringing it to council.</li> <li>• Initial requests allow the Municipality the opportunity to provide further guidance to the Applicant on requirements for the request. Any substantial changes to the plans that may be needed can be suggested at this time.</li> <li>• Following approval by the municipal designated assessor, the project is then brought to council for a resolution of approval. A resolution is likely what is required by the Province as proof of approval.</li> </ul>	<p><i>“Initial requests shall be directed to _____ [councillor, appointee, or municipal office], preferably in writing.”</i></p>
<p><b>B. Consider if your municipality will require any fees to be paid for application processing and/or site visits, or inspection.</b></p>	<ul style="list-style-type: none"> <li>• Costs to the Municipality can be substantial if it is receiving high numbers of applications. Consider what the costs are to the Municipality for processing and reviewing applications and the costs associated with potential site visits.</li> <li>• It is recommended that if you design a fee structure for tile drainage applications, make any requirements for fees clear to applicants.</li> </ul>	<p><i>“All required application fees must be submitted at the time when the application is submitted.”</i></p>
<p><b>2. Will the Municipality have a deadline(s) by which the application needs to be submitted?</b></p>	<ul style="list-style-type: none"> <li>• Deadlines give the Applicant an idea of when the project will be reviewed. It also gives the approvers the opportunity for a site visit if required before winter.</li> </ul>	<p><i>“Landowners seeking tile drainage approvals should submit preliminary plans before _____ of each year for review and comment. Final plans must be submitted to _____ [council or appointee] no later than _____ of each year for final council decision.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>3. Consider what information needs to be included on an Applicant's application.</b></p>	<ul style="list-style-type: none"> <li>• Important information should be included on the application including information on the designer and installer, contact information, and a detailed drainage map.</li> <li>• Applications should include an estimated start date and an estimated completion date.</li> <li>• As per the Water Rights Regulation (Item 4(2)), applications should also include: <ul style="list-style-type: none"> <li>“In the case of an application for a licence to construct drainage works, the application shall be accompanied by: <ul style="list-style-type: none"> <li>a) a sketch or plan showing the body of water or area proposed to be drained;</li> <li>b) a sketch or plan and a description of the proposed drainage works and the proposed drainage outlet;</li> <li>c) where the body of water proposed to be drained lies in whole or in part upon land not owned by the applicant, evidence that all riparian owners along the shoreline of the body of water have approved the proposed drainage works;</li> <li>d) where the water proposed to be drained will leave the applicant's land, evidence showing the approval of the recipient of the drained water.”</li> </ul> </li> </ul> </li> </ul>	<p><i>“The application shall be dated, shall have the designer's name and contact information and shall have the installer's name and contact information. The maps must be clear and depict the drainage design in detail including type and location of outlets.”</i></p>
<p><b>4. Will you require a site visit prior to approving the project?</b></p>	<ul style="list-style-type: none"> <li>• A site visit can be an important way to view the site and get a clear idea of the scope of the project.</li> <li>• Decide who will be attending the site visit. For example, the Head of Council, and/or the Ward Councillor, and/or, Municipal Foreman, and/or Conservation District Appointee.</li> </ul>	<p><i>“The Heads of Council, Ward Councillor, and Municipal Foreman may choose to attend the project site prior to making a decision.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>5. Consider the soil and water conditions of the location where the tile drainage project is proposed.</b></p>	<ul style="list-style-type: none"> <li>• Not all fields will benefit from tile drainage. Soil and water conditions play a large role in the suitability of a site for tile drainage. Be aware of the soil types in the municipality and where high-water table locations may be. Consulting with your Conservation District where applicable and referring to information such as the Province of Manitoba soil maps, Manitoba Soil Survey Reports, and the Manitoba Agriculture Services Corporation maps will assist in these assessments. Take these locations into account when considering approval of a tile drainage project.</li> <li>• It is important to investigate the potential impacts that a tile drainage project may have on downstream water quality. Some municipalities may require the applicant or installer to supply information on the potential impacts of nutrient loading in drain tile water before approving the project</li> </ul>	<p><i>“Tile drainage projects will be reviewed in large part based on location within the municipality and specifically in relation to soil types found within the municipal boundaries. Poorly draining soils with high water table components or artesian conditions will be noted as areas of concern. Manitoba Agriculture Services Corporation maps will be used to assist in soil quality determination.”</i></p>
<p><b>6. Consider if your municipality will have a standard, maximum drainage coefficient. If so, what will that drainage coefficient be?</b></p>	<ul style="list-style-type: none"> <li>• The maximum allowance suggested by the Province of Manitoba is a drainage coefficient of three-eighths of an inch per day. However, a municipality needs to consider the capacity of their current municipal systems in handling different drainage coefficients. Many municipalities use a drainage coefficient of one-quarter of an inch per day as a maximum to ensure that their municipal systems have the capacity to handle the flow from the tile drainage systems. Variations may be available in certain circumstances, for specific crops and site-specific conditions at the Municipality’s discretion.</li> </ul>	<p><i>“Drainage co-efficient of the tile outlet shall not exceed _____ of an inch per day. Tile drainage installations shall not use perforated main drains unless prior approval has been received from Council.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>7. Consider the location where the tile drainage water will be discharged.</b></p>	<ul style="list-style-type: none"> <li>• What type of waterways will the drainage water enter?</li> <li>• Does the tile drain into an on-farm retention pond? Does the pond have outlets/overflows into a waterway?</li> <li>• Drainage water should enter waterways directly whenever possible. Alternatives to immediate discharge from a tile network are increasingly being considered and researched, including edge-of-field practices that involve capturing or treating drainage water.</li> <li>• What if the drain outlets require power?</li> <li>• Should any powerlines lines be buried on private property?</li> </ul>	<p><i>“Tile drainage water shall only be discharged into a natural grassed waterway, municipal or provincial drain and shall not cross private lands without prior licensed approval.</i></p> <p><i>Tile drain outlets should discharge into natural or provincial waterways as directly as possible to minimize impact on downstream municipal drains.</i></p> <p><i>If tile drain outlets require a source of power, the powerlines must be marked and may be required to be buried at a depth determined by council. Council may require all tile outlet lines to be buried on private land with any required easements in place prior to the installation.”</i></p>
<p><b>8. Consider if erosion control measures should be used at outlet locations.</b></p>	<ul style="list-style-type: none"> <li>• The Province stipulates that rip-rap is required at tile drainage outlets.</li> <li>• If modifications are required to the drainage outlet by the Province, Municipality or the Applicant, it is the Applicant’s responsibility to maintain or repair the erosion control.</li> <li>• The Province requires outlet pipe locations be marked with visible bollards, antennae or by any other reasonable and effective means by the applicant.</li> </ul>	<p><i>“Erosion control measures must be installed and maintained at the outlet(s) by the Applicant/Landowner.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>9. Consider requiring control structures on the tile drainage system</b></p>	<ul style="list-style-type: none"> <li>Control structures located at the outlets of the tile drainage system allows the Landowner to limit the operation of the tile drainage network at times when the drainage is not flowing.</li> <li>Control structures can also be used for a BMP called controlled (also known as conservation) drainage in which water management zones are created based on groundwater contours. Water in the tiles can be held back with the use of adjustable baffles, either in-line or in control boxes, which regulate the amount of water allowed to flow.</li> <li>Site-specific conditions dictate whether control structures would be feasible.</li> <li>If your municipality is considering a restriction date when flow from tile drainage must be stopped (in the fall), you may want to consider requiring control structures.</li> </ul>	<p><i>“All tile drainage projects may include the installation of an approved control device to restrict discharge water into a municipal or natural drain. It is at Council’s discretion to exempt a given tile drainage project from the requirement for an approved control device.”</i></p>
<p><b>10. Consider if there will be a standard date when flow from a tile drainage system must stop.</b></p>	<ul style="list-style-type: none"> <li>Flow during late fall months can lead to frozen culverts downstream. Some municipalities require that flow from tile drainage systems cease at a specific date each year.</li> <li>Note that such a provision discourages the release of water that would increase capacity in the soil profile come the spring.</li> </ul>	<p><i>“No discharge of water from a tile drainage network into municipal drains will be permitted after _____ unless written authorization from the Municipality is obtained to extend this date.”</i></p>
<p><b>11. Consider who shall be responsible for any modifications to existing municipal drains should they be required for the tile drainage project.</b></p>	<ul style="list-style-type: none"> <li>If the tile drainage project should require modifications to a municipal drain, many municipalities state that the modifications are the sole responsibility of the Applicant under the supervision of the Municipality.</li> </ul>	<p><i>“Modifications to existing municipal drains, when necessary for a successful tile drainage project, shall be the sole responsibility of the Applicant.</i></p> <p><i>The outlet must be constructed in a way that water cannot breach the back-slopes of the municipal drain and run across private property.</i></p> <p><i>The flow must be directed all the way to the natural or provincial waterways prior to the approval of the installation of tile drainage and shall comply with this policy.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>12. Consideration should be given to the maintenance of the ditches downstream and the licence holder’s responsibilities.</b></p>	<ul style="list-style-type: none"> <li>• Ensure ditches downstream of the tile drainage outlets are kept cleaned and clear of cattails and other excessive vegetation.</li> <li>• Consider what the “point of adequate outlet” is. To what distance is the maintenance the licence holder’s responsibility?</li> </ul>	<p><i>“The licence holder of the tile drainage must be responsible for mowing and maintenance of ditches downstream of tile outlets up to the natural waterway to mitigate against future cattails growth.”</i></p>
<p><b>13. Consider how tile drainage can integrate into the Municipality’s integrated water management strategies including drainage, water retention, and other beneficial management practices.</b></p>	<ul style="list-style-type: none"> <li>• Tile drainage can affect more than just the field where it is installed. It is important to consider how tile drainage may affect downstream environments and the watershed. In addition to draining fields for agricultural purposes, tile drainage can create benefits and challenges on a broader, watershed scale. A tile drainage project should not be installed where it may have a negative impact on wetlands. Take time to investigate practices that farmers in your area can be encouraged to adopt when designing their drainage systems. Consider how tile drainage can be integrated with other water management practices such as distributed retention, recycling and utilization.</li> <li>• Your local Conservation District and the Province of Manitoba are great resources for ideas and implementation of Beneficial Management Practices (BMPs) and innovations on water management. Many Conservation District Integrated Watershed Management Plans include a surface water management plan which can provide further information on drainage and water management.</li> </ul>	<p><i>“Where possible tile water should be part of an integrated water management strategy including drainage, retention and recycling.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>14. Consider if there is a “valid until” date or a date by which the approved project must be completed. Consider what the implications are if an Applicant waits several years from the approval to construction.</b></p>	<ul style="list-style-type: none"> <li>• Providing a deadline by which the project needs to be completed will ensure that the work is done on a timely basis under the same circumstances that the project was approved under.</li> <li>• Consider that, over periods of years, changes could occur, both locally and provincially, such as to regulatory requirements, environmental conditions and scientific knowledge. Consider how such changes could affect a proposed tile drainage project should it be completed many years after it was originally approved.</li> <li>• When the Province grants a licence, it is in perpetuity and Applicants are permitted to build exactly what they planned to. However, often circumstances and plans change over years that may warrant a new application to the municipality.</li> <li>• If land changes hands, the new owner would likely have to reapply. Rules vary by jurisdiction.</li> </ul>	<p><i>“The proposed tile project must be completed within ____ years following the approval of the application. Should the installation not be completed by this time, a second or renewed application must be submitted to the Municipality.”</i></p>
<p><b>15. Does the project comply with provincial legislation? All applications must meet the requirements of the Manitoba Water Rights Regulation.</b></p>	<ul style="list-style-type: none"> <li>• Once a resolution from Council approves the application, the final, approved application must be sent to Manitoba Sustainable Development to receive a drainage licence before work can begin.</li> <li>• Provincial approval is required before construction can begin.</li> <li>• It is up to the Municipality to create a process for the Applicant to apply to the Province for a drainage licence. <ul style="list-style-type: none"> <li>▪ The Municipality can submit the application to the Province on behalf of the applicant or the applicant can submit the Provincial application themselves.</li> <li>▪ Decide who will pay an application fees to the Province when the application is submitted.</li> <li>▪ If the installer is applying on behalf of the Landowner, the application must be in the Landowner’s name.</li> </ul> </li> </ul>	<p><i>“Tile drainage must comply with legislation of the Province of Manitoba.”</i></p>

CONSIDERATION	DISCUSSION POINTS	EXAMPLE OF BY-LAW TEXT
<p><b>16. Consider if or how the Municipality will monitor the progress or the results of the tile drainage project. Is the Applicant or Installer required to submit any documents or records after the project has been completed?</b></p>	<ul style="list-style-type: none"> <li>• The Municipality may choose to monitor the installation of the tile drain project and/or may require information from the installer after the project is completed for municipal records. The Installer/Applicant may be expected to submit to the municipality an installation plan. The GPS files may also be requested in a format specified by the Municipality (for example, in an Excel spreadsheet or as a digital map).</li> <li>• It may be important for the Municipality to keep records of tile drainage installations for instances where land changes hands years later.</li> <li>• The application should identify milestone deadlines for portions of the project. This should include an estimated start date and estimated completion date.</li> <li>• One method of monitoring the installation could be a random audit during the process. The installer would be required to execute the as-constructed detail of the project and be open to inspection on request of the Municipality.</li> </ul>	<p><i>“The applicant shall submit an “as constructed” document to the Municipality including the installation plan with GIS layer if available following the completion of the project. This report must be submitted to the Municipality _____ days following the project’s completion.”</i></p>



## Example

### APPLICATION FORM FOR TILE DRAINAGE

(Adapted from RM of Portage la Prairie)

**Applicant Name:** \_\_\_\_\_

**Date of Application:** \_\_\_\_\_

By completing and signing this application, the Applicant agrees to the terms of the Tile Drainage Policy No. \_\_\_\_\_ and amendments.

Proposed start date of project: \_\_\_\_\_

Proposed completion date of project: \_\_\_\_\_

Will a control device to restrict or shut off the discharge of water into municipal or natural drain be installed as a part of this project? If so, please describe the proposed control device.

\_\_\_\_\_  
\_\_\_\_\_

Will discharge of water from tile drainage be expected after [Date] \_\_\_\_\_? Yes or No \_\_\_\_\_ (If Yes, written authorization from the Municipality is required to extend this date).

Names of adjacent properties owners that may be affected by the water run-off: \_\_\_\_\_

\_\_\_\_\_

Name and contact information of installer employed to do this project. Name of consulting engineer if applicable. \_\_\_\_\_

\_\_\_\_\_

**Example Application Form Continued...**

**Terms of Compliance:**

Any tile drainage must be installed with a \_\_\_\_\_ drainage coefficient.

There is no obligation on the Municipality to improve the existing municipal drainage system to accommodate a tile drainage project.

The Municipality may authorize the proponent to perform private works in a municipal drain to accommodate a tile drainage project, however the Municipality would establish the elevation levels and the hiring of a contractor to perform the work and the proponent would be responsible for all costs associated with the work. This may require the proponent to address a steep drop or loose soil conditions.

The proponent may be responsible for any future drain maintenance costs such as mowing, the removal of siltation and/or blocks in the drain.

If the proponent proposes to install an infrastructure under or through a municipal right-of-way, the proponent must receive approval from the Municipality prior to the installation of the pipe and the method of the installation may be boring (directional drilling). This would require the proponent to obtain a Public Works Licence from Municipality.

The proponent may be required to enter into a Development Agreement with the Municipality if the tile drainage project will be discharging water into a municipal drainage system.

**Date This \_\_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_\_**

**Applicant's signature \_\_\_\_\_**

**Witness Signature \_\_\_\_\_**

## REFERENCES AND USEFUL LINKS

- 1) American Society of Agricultural and Biological Engineers: Standards and Resource Library: <https://elibrary.asabe.org/toc.asp>
- 2) British Columbia Ministry of Agriculture Drainage Factsheet: "Special Care in the Installation of Subsurface Drainage on Sloping Land". <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/water/drainage>
- 3) Manitoba Agriculture: <http://www.gov.mb.ca/agriculture/environment/index.html>
- 4) Manitoba Agricultural Services Corporation: <https://www.masc.mb.ca/masc.nsf/index.html?OpenPage>
- 5) Manitoba Agricultural Water Management Association (MAWMA): <http://www.mawma.org/>
- 6) Manitoba Municipal Act: <http://web2.gov.mb.ca/laws/statutes/ccsm/m225e.php>
- 7) Manitoba Soil Survey Reports: <https://www.gov.mb.ca/agriculture/land/soil-survey/index.html>
- 8) Manitoba Water Rights Act: <http://web2.gov.mb.ca/laws/statutes/ccsm/wo8oe.php>
- 9) Manitoba Water Rights Regulation: [http://web2.gov.mb.ca/laws/regs/current/\\_pdf-regs.php?reg=126/87](http://web2.gov.mb.ca/laws/regs/current/_pdf-regs.php?reg=126/87)
- 10) Ontario Ministry of Agriculture, Food, and Rural Affairs: Best Management Practices Series: Cropland Drainage: [http://srrcd.ca/wp-content/uploads/2018/01/ON\\_Cropland\\_Drainage\\_BMP.pdf](http://srrcd.ca/wp-content/uploads/2018/01/ON_Cropland_Drainage_BMP.pdf)
- 11) Red River Basin Commission Tile Drainage Webinars: RRBC Winnipeg YouTube Channel (<https://www.youtube.com/channel/UC4jRwMH-CbgYM6pQh1EpsAQ>)
  - Webinar 1 - [How Tile Drainage Works - February 21, 2017](#)
  - Webinar 2 - [Down Stream Impacts of Tile Drainage - February 28, 2017](#)
  - Webinar 3 - [Tile Drainage, the Watershed, and the Environment - March 8, 2017](#)
  - Webinar 4 - [Policy and Local Government Considerations - March 16, 2017](#)



## ACKNOWLEDGEMENTS

*We would like to thank the following partners for their collaboration on this Tile Drainage By-Law Template:*

Red River Basin Commission  
Province of Manitoba – Manitoba Agriculture, Manitoba Sustainable Development  
Assiniboine River Basin Initiative  
Cooks Creek Conservation District  
East Interlake Conservation District  
La Salle Redboine Conservation District  
Pembina Valley Conservation District  
Seine-Rat River Conservation District  
RM of Dufferin – Reeve, George Gray

*We would like to thank the following Municipalities for their contributions to our example by-law wording and application:*

RM of Dufferin  
RM of Portage la Prairie





**Manitoba – Minnesota – North Dakota – South Dakota**

**Red River Basin Commission**

205 – 1100 Concordia Ave.,  
Winnipeg, MB

Phone: 204-982-7250

Email: [info@redriverbasincommission.org](mailto:info@redriverbasincommission.org)

1120 28<sup>th</sup> Ave. N, Suite C  
Fargo, ND 58102  
Phone: 701-356-3183