



Manitoba Conservation and Water Stewardship

Subdivision Drainage Plan Requirements Fact Sheet

This Factsheet is intended for proponents of urban residential, rural residential, urban commercial and rural commercial subdivision developments.

The Water Rights Act as it relates to Subdivision Development

The Water Rights Act suggests that no person shall control water or construct, establish or maintain any water control works unless he or she holds a valid licence to do so. Water control works are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that 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 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.

If the proposal in question advocates any of these activities, please apply for a Water Rights Licence to Construct Water Control Works.

Application for a Water Rights Licence

To apply for a water rights licence, a completed licence application form along with the licence fee must be submitted to the Water Control Works and Drainage Licensing Section at the address indicated on the application form.

Application forms can be obtained from the Manitoba Department of Conservation and Water Stewardship in Winnipeg or from Regional Offices of the Department (see attached contact list).

Engineering Design and Analysis

The following information is required in a subdivision development drainage plan submitted for review by the Water Control Works and Drainage Licensing Section.

With exceptions that may be granted by the Department, subdivision storm water management and drainage plans shall be designed by a professional engineer registered to practice in the Province of Manitoba. The construction of the water control works shall be in accordance with the methods and materials as specified by the engineer.

- The Applicant shall submit two (2) copies of the design drawings of the reservoir and associated works approved by the engineer to Water Stewardship for assessment.
- Developments totaling less than 10 lots (total) in size with lot sizes larger than 2 acres may, in some instances, be subject to less stringent engineering design requirements. Nevertheless, the design and construction of the project shall still be completed in accordance with acceptable engineering standards. The Applicant may be required to provide technical drawings showing design and construction details.

- Where the Department determines it to be appropriate, the Applicant may be required to conduct an engineering analysis of hydrologic regime changes, potential physical impacts, and proposed mitigation measures.

Drainage Plan Requirements:

Hydraulic Design Requirements:

- Hydraulic design calculations to be provided for review using a design scenario of a 1 in 25 year design storm detailing that post development storm water runoff rates of the subject property are to be equal to or less than pre development runoff rates. *
- Site must be able to store, up to and including, a 1 in 25 year design storm event. (Ponding equals the difference between a 1 in 5 year allowable flow and a 1 in 25 year post development flow). This is typically done through the use of retention ponds or internal storage via ditches and drainage patterns.
- Report must clearly detail:
 - Pre-development catchment area runoff volumes and rate for design event
 - Post development catchment area runoff volumes and rate for design event
 - Volume of water to be stored and proposed runoff rate
- Design flow is the Daily Mean Discharge, that is, a constant over 24 hours
- In cases where increased post development runoff can not be accommodated within the development – the engineering plan must detail how the developer will mitigate negative downstream impacts that may result due to the increase in surface water flows.**

* Please note that if the development intends to outlet through Manitoba Infrastructure and Transportation infrastructure (highways or PR culvert) then different drainage standards may apply – please contact MIT for details

** Mitigation may include the upgrading of existing drainage infrastructure such as culverts and drainage channels downstream to accommodate additional runoff.

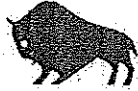
Engineered Site Plans Requirements:

- Detailed engineering plans outlining any construction, alteration, improvement, blocking or modification of new or existing drainage works servicing the property.
- Drain flow direction(s)
- Proposed/Existing culvert sizes and locations and/or schematics of any buried land drainage system
- Detailed design drawings of proposed storm water storage works
- Typical cross sections of proposed drains and ditches
- Existing and proposed geodetic lot grade elevations (in metric)
- Public right-of-ways or easements.
- Outlet of proposed drainage works (where the water exits the development) to be licenced in accordance to *The Water Rights Act* incorporating the above mentioned criteria.

The above list of requirements is specific to the surface water drainage aspect of a development only. Due to the nature of surface water drainage there are other agencies that may have input as to drainage standards and requirements due to the nature of their infrastructure and mandate. Agencies which may require further hydraulic and hydrologic information related to surface water runoff from subdivisions include:

- Manitoba Infrastructure and Transportation (MIT) – this Provincial Department owns and operates the provincial drain and public road system throughout Manitoba. Their road and drainage infrastructure is significantly impacted by surface water runoff, and if a development's drainage outlets through or into provincial infrastructure then MIT's approval will be required.
- Indicate flood protection level (FPL) if development is located within flood fringe area. Existing and proposed geodetic lot grade elevations (in metric) both on the site and on adjacent property, public right-of-ways or easements.
- Federal Department of Fisheries and Oceans (DFO) – any surface water drainage works that impact fish habitat will require the separate approval of DFO. DFO determines whether the proposed development will have a potential impact on fish habitat, and will require compensation for any potential destruction of fish habitat caused by alteration of existing drainage works. It is entirely the responsibility of the proponent to contact DFO in Winnipeg at (204) 983-5220.
- Your municipality
- Other regulatory agencies as required.

The approval of a drainage plan does not mean that developments that are adjacent to or encroaching on natural waterways are not at risk from overbank or overland flooding during extreme runoff events. There may be instances where overbank or overland flooding occurs.

Manitoba**Water Control Works &
Drainage Licensing Section
Contact List**

	Office #	E-mail address
Arborg (Box 790, 329 River Road R0C 0A0)		
Ken Stadnek	641-3918	ken.stadnek@gov.mb.ca
Roger Maksymchuk	641-3663	roger.maksymchuk@gov.mb.ca
Brandon (1129 Queens Ave. R7A 1L9)		
Perry Stonehouse	726-6764	perry.stonehouse@gov.mb.ca
Jackie Dixon	724-4042	jackie.dixon@gov.mb.ca
Rick Pemkowski	761-0013	rick.pemkowski@gov.mb.ca
Ed MacKay	724-3625	ed.mackay@gov.mb.ca
Tara Wiess	761-7841	tara.wiess@gov.mb.ca
Mark Lenius	726-6061	mark.lenius@gov.mb.ca
Dauphin (27 Second Ave SW R7N 3E5)		
Jason Tomski	572-5543	jason.tomski@gov.mb.ca
Darren Nicklin	572-7265	darren.nicklin@gov.mb.ca
Deloraine (101 Finlay Ave. E. R0M 0M0)		
Tim Speers	747-2365	tim.speers@gov.mb.ca
Dugald (Box 160, 712 Dugald Road R0E 0K0)		
Rose Kapty	918-3996	rose.kapty@gov.mb.ca
Gimli (75 7th Avenue R0C 1B0)		
Jim McMahon	641-0035	james.mcmahon@gov.mb.ca
Wendy Lewick	642-2259	wendy.lewick@gov.mb.ca
Morris (871 Southwood Drive R0G 1K0)		
Dave Buhler	746-7323	dave.buhler@gov.mb.ca
Neepeawa (Box 20000, 123 Main Street R0J 1H0)		
Ingrid Rothnie	841-3862	ingrid.rothnie@gov.mb.ca
Shoal Lake (Box 598 R0J 1Z0)		
Barb Kingdon	764-0298	barb.kingdon@gov.mb.ca
Somerset (Box 189 279 Carlton Street R0G 2L0)		
Ginette Caillier	392-2736	ginette.caillier@gov.mb.ca
Steinbach (323 Main Street R5G 1Z2)		
Gil Lemoine	878-0245	gil.lemoine@gov.mb.ca
Stonewall (293 Main St. Box 4558 R0C 2Z0)		
Geoff Reimer	467-4450	geoff.reimer@gov.mb.ca
Wayne Henderson	461-2425	wayne.henderson@gov.mb.ca
Mandy Letemplier	461-3114	mandyjo.letemplier@gov.mb.ca
Swan River (201 Fourth Avenue S. R0L 1Z0)		
Dan Roberts	281-2122	dan.roberts@gov.mb.ca