

Approved by Council – November 28, 2016

SURFACE DRAINAGE OF PROPERTIES

BACKGROUND:

The Town of Redcliff has issues with respect to the capacity of the sanitary sewer system. Most of the capacity issues in the sanitary sewer system are a result of high wet weather peak flows in the system.

Surface drainage being directed to the sanitary sewer system is one cause of extremely high wet weather peak flows.

Groundwater flowing into the sanitary sewer system also increases the wet weather peak flows in the system.

In addition surface drainage and groundwater flows into the sanitary sewer system increasing the volume of sanitary sewage that must be paid for by the Town to be treated.

Weeping tile is designed to allow groundwater to flow into a pipe, it is critical to ensure that the weeping tile is connected to the storm sewer system and not the sanitary sewer system.

Surface drainage and ground water flows into a sanitary sewage system, are referred to as inflow and infiltration (I&I).

Large areas of impervious areas being directly connected to the storm sewer system greatly increase the peak flow the storm system has to accommodate. For this reason most large industrial and commercial sites are required to provide onsite peak flow attenuation, most new subdivisions are built with trapped lows on the roads to store peak flows during major runoff events. Roofs are a substantial portion of the impervious area and should never be directly connected to storm sewers as doing so will dramatically increase the peak flow in the storm system.

Peak flows in sewer systems above the maximum design flows result in:

- back-ups of the sewer system,
- potential for manhole lids to be blown off,
- potential for damage to the sewer system, and
- potential for sink holes as soil is eroded by a broken sewer system.

INTENT OF THIS POLICY

The purpose of this policy is to identify:

- Where surface drainage and weeping tile are to be directed to minimize the impact on the Town's drainage systems (sanitary sewer and storm sewer).
- When drainage issues are discovered, when will they be alleviated?

POLICY:

1. All rain water collection including down spouts shall not be connected to a buildings weeping tile system or to the sanitary service lines inside or exterior to the building. The intent of this section is to support the regulations of the Alberta Environmental Protection Act as it pertains to the disposal and treatment of domestic sewage.
2. Rain water leaders shall be installed so as to direct the water to the nearest point of public land, either a street or lane or public land, or drainage swale. The intent is that rain water leaders are not directing runoff onto other parcels of private property.
3. Rain water leaders are to discharge to splash pads or other erosion prevention and mitigation measures.

4. Rain water leaders are not to discharge directly onto streets or lanes or public lands, or drainage swales but are first to discharge onto splash pads or other erosion prevention measures on the private property before draining to streets or lanes or public lands, or drainage swales.
5. If the Town observes that drainage from private property is creating erosion or sedimentation issues on streets or lanes or public lands, or drainage swales the Town will require the property owner to repair the damages and install erosion prevention measures and control sedimentation on the property prior to runoff discharging to streets or lanes or public lands, or drainage swales.
6. Residential subdivision designs shall include storm sewers where it is possible to deal with weeping tile connections within the immediate area of the subdivision. In locations where there is a substantial amount of storm sewer main required, the decision to include or exclude the storm sewers within the subdivision will be at the discretion of Town Council.
7. Where storm sewer services are included in a development, weeping tile shall be connected to the storm sewer service.
8. Where an existing storm sewer is located in a road abutting a property, all new service installations will be required to have a storm sewer service to which the weeping tile is to be connected.
9. Existing developments that are in violation of this policy will be dealt with on a case by case basis. Any existing weeping tile connections to the sanitary sewer system will be allowed to remain unless the Town extends storm sewer services into the property at which time the property will be required to connect the weeping tile to the storm sewer service. Any rain water leaders that drain into the sanitary sewers are to be disconnected.