

SCHEDULE 1

Water Conservation Objective

Environmental Flow Criteria

The Red Deer River tributaries have a *Temporary Diversion Licence* (TDL) maximum diversion rate, a Red Deer River mainstem *Water Conservation Objective* (WCO) and may have an *In-stream Objective* (IO) minimum flow requirement below which no abstractions are permitted.

In addition sub-basin 05CH contains the Deadfish-Sheerness System administered by the *Special Areas Board* (SAB) as a part of SAB's contractual obligation with Environment and Parks (EP) – Operation Infrastructure Branch (OIB). The map of the region bound by the Deadfish-Sheerness System is provided at the end of this document. The SAB review all surface water applications within the Deadfish-Sheerness System.

Tributary Maximum Diversion Rate

The maximum rate of diversion from a tributary shall not exceed 10% of the current recorded flow measured either at the point of diversion or at a downstream *Water Survey Canada* (WSC) hydrometric station on the tributary, and applies to the cumulative sum total of all upstream concurrent TDL abstractions.

Tributary IO

The following tributaries in sub-basin 05CH require SAB approval and may have a minimum IO flow below which no abstractions are permitted:

- Berry Creek and its tributaries lie within the Deadfish-Sheerness System. Applicants must obtain a water access agreement from the SAB for any projects withdrawing from Berry Creek from approximately 3 km upstream of Carolside Reservoir to the confluence with the Red Deer River. Please refer to the licence application request process at the end of this document.

If the SAB approve the application the Berry Creek monthly IO flow from March to August is as follows:

Month	Mar	Apr	May	Jun	Jul	Aug
Instream Objective (Q80) (cms)	0.02	0.24	0.06	0.06	0.02	0.02

Note: cms = cubic metres per second

- Deadfish Creek and its tributaries lie entirely within the boundary of Special Area Board. Deadfish Water Supply System uses a certain reaches of the Deadfish Creek as its System Water Conveyance Channel. Applicants must obtain a water access agreement from the SAB for any projects along Deadfish Creek. Please refer to the licence application request process at the end of this document.

Red Deer River Mainstem WCO

The Red Deer River WCO applies to the Red Deer River tributaries within sub-basin 05CH:

- from November to March, inclusive: a rate of flow in the Red Deer River that is 45% of the natural rate of flow or 16 *cubic metres per second* (m^3/s) whichever is greater at any point in time, or
- from April to October, inclusive: a rate of flow in the Red Deer River that is 45% of the natural rate of flow or 10 m^3/s whichever is greater at any point in time.

Environmental Flow Monitoring

Summer (Open Water) Season Tributary IO

Tributaries with Gauging Stations

The summer open water season typically runs from March 1 to October 31 however the dates may vary annually. Near real-time tributary flows in sub-basin 05CH are monitored by Water Survey Canada for the select stream(s) listed below:

- Berry Creek and its tributaries: upstream of the *Berry Creek near Rose Lynn* (05CH008) hydrometric station use 05CH008 and downstream of hydrometric station 05CH008 use the *Berry Creek near the Mouth* (05CH007) Water Survey Canada hydrometric station.

Ungauged Tributaries

- All remaining ungauged tributaries in sub-basin 05CH require a manual flow measurement.

Summer (Open Water) Season Red Deer River WCO

The summer open water season typically runs from March 1 to October 31 however the dates may vary annually. During the summer season monitor the Red Deer River WCO using the *Red Deer River near Blindloss* (05CK004) Water Survey Canada hydrometric station.

Winter (Ice Cover) Season

During the winter ice cover season near real-time recorded flows for the Red Deer River tributaries and natural flows for the Red Deer River mainstem are unavailable therefore the following criteria apply:

1. If the tributary has a near real-time 12-month active hydrometric station use the most recent manual WSC stream flow measurement (typically updated monthly).
2. If the cumulative TDL abstraction volume is equal to or greater than 1,000 cu.m on the tributary obtain a manual winter flow measurement
3. If the cumulative TDL allocation volume is less than 1,000 *cubic metres* (m³) then:
 - i) If the tributary has historic streamflow data, up to 10% of the historic mean monthly flow may be allocated otherwise,
 - ii) If the tributary is ungauged the water may be withdrawal without monitoring provided the total abstraction volume does not exceed 1,000 m³
4. The *Dickson Dam Tunnel Outlet* (05CB007) Water Survey Canada hydrometric station operates during the winter ice cover season. In order to meet the Red Deer River mainstem WCO requirement TDL abstractions require a minimum flow of 16 m³/s to be met at the *Dickson Dam Tunnel Outlet* (05CB007).

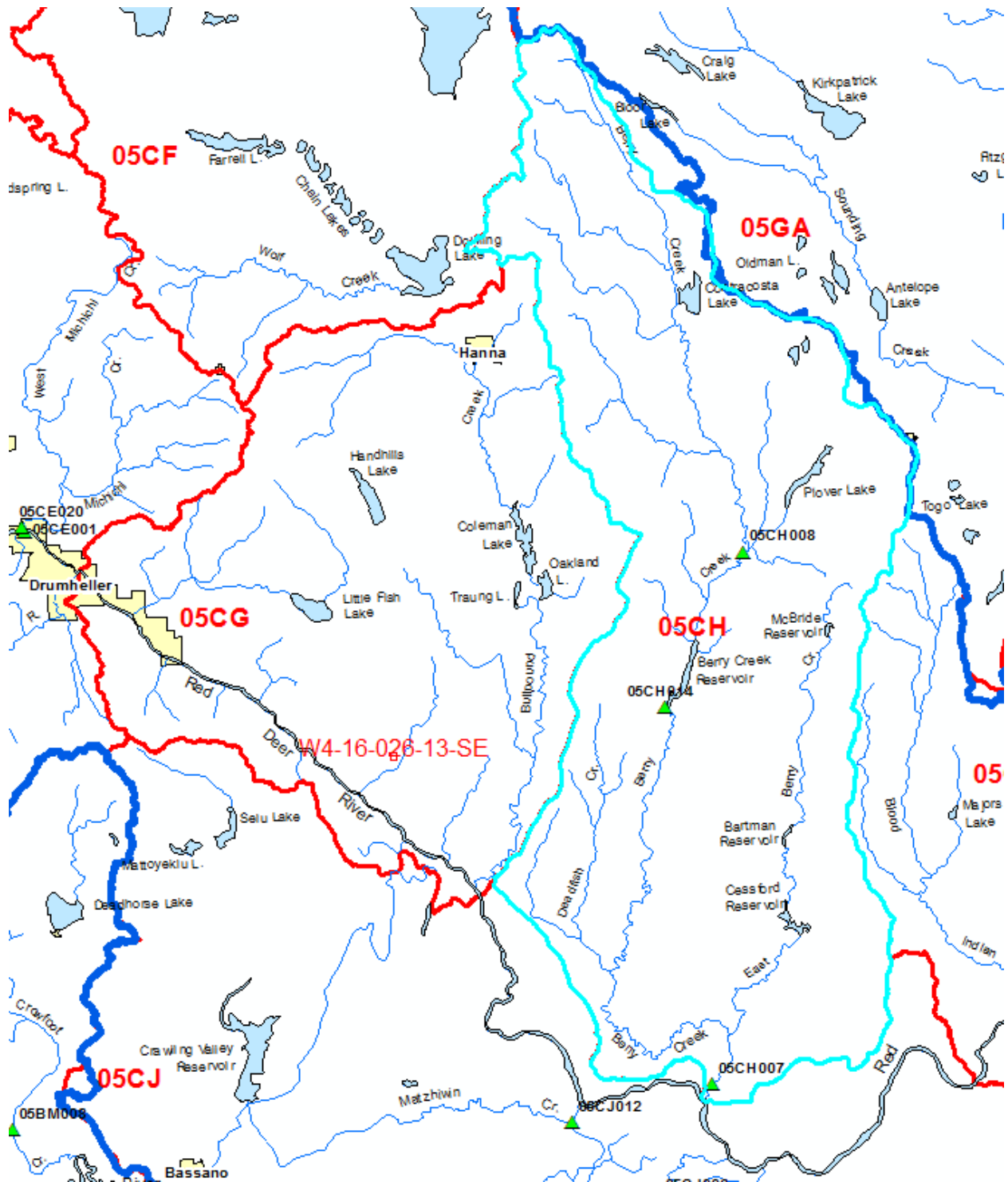
Environmental Flow Monitoring Websites

Up-to-date water flow information is available most of the year at Alberta Environment's website:

<https://rivers.alberta.ca>

The direct link is [Red Deer River Basin Related Links.pdf](#)

Sub-Basin 05CH General Location



Requests for Temporary Diversion Licences (TDL) on the Deadfish-Sheerness System

A part of Deadfish-Sheerness system is located in sub-basin 05CH. The system is administered by the *Special Areas Board (SAB)* as a part of contractual obligation of SAB with Environment and Parks – Operation Infrastructure Branch. The Deadfish-Sheerness system and Special Area Board boundary is outlined in the map shown below. The Deadfish-Sheerness System typically operates from May to September however the actual operation dates varying annually. To find out if the Deadfish-Sheerness System is in operation contact *Alberta Environment and Parks*, Bow Operations Support Engineer at 403-297-6341 or Operations & Maintenance Supervisor at 403-529-3101.

All surface water applications within the Deadfish-Sheerness system boundary are reviewed by the SAB and EP-OIB. The application process varies if the Deadfish-Sheerness System is in operation or not in operation as explained below:

1. When Deadfish-Sheerness System is operating (Generally May – September):

If a party requires water on a temporary basis, and if source of water is from system reservoir, constructed canals, natural channels used for system water conveyance, or dugouts off a constructed canal or natural channel, then:

- i. Applications will be reviewed by the SAB and EP-OIB staff. Please contact SAB at 403-854-8054 or 403-854-5626.
 - ii. Complete Special Areas Board Water Access Agreement Form.
 - iii. The Special Areas Board, in consultation with Operations Infrastructure Branch (OIB), determines if water from the system can be used by the party.
 - iv. If appropriate, an agreement with (OIB) is issued.
 - v. TDL is not required.
- ❖ Water used by Party considered part of the OIB Sheerness Deadfish System licence authorizing the diversion of water from the Red Deer River for Irrigation and other lawful purposes.

2. When Sheerness Deadfish System is not operating (Generally October - April):

If a party requires water on a temporary basis, the type of authorization depends on source of water:

- a. If source of water is a natural stream (Berry Creek, Deadfish Creek, Bullpound Creek):
 - i. Apply for a TDL on WATERS.
 - ii. Process TDL on WATERS.
- ❖ TDL is required as it is natural water not water from the Red Deer River from the Sheerness Deadfish System or stored water.
- b. If source of water is a reservoir (Carolside, Janet, Woodrow, Deadfish, or dugouts off of a canal or natural channel used for conveyance of system water)
 - i. Contact the Special Areas Board at 403-854-8054 or 403-854-5626.
 - ii. Complete Special Areas Board Water Access Agreement Form.
 - iii. The Special Areas Board, in consultation with Operations Infrastructure Branch (OIB), determines if water from the system can be used by the party.
 - iv. If appropriate, an agreement with (OIB) is issued.
 - v. TDL is not required.
- ❖ Water used by Party considered part of the OIB Sheerness Deadfish System licence authorizing the diversion of water from the Red Deer River for Irrigation and other lawful purposes.

Though major portion of Sub-watershed 05CH lies within boundary of Special Area Board and there is an effect of Sheerness Deadfish System Operation, there are some areas that are beyond the boundary and there is no effect of Operation. For example, the portion (of Sub-watershed 05CH) that is beyond Special Area Board's boundary, very upstream or portions located to the very north from Carolside or Berry Creek Reservoir, there is no effect of Sheerness Deadfish System operation. If any party requires water on a temporary basis from that portion of Berry Creek, the party may be able to apply for a TDL on WATERS; however, the party needs to call EP-OIB staff at 403-297-6341 or 403-529-3101 before application to verify the boundary and make sure the source is purely natural stream.

DEADFISH-SHEERNESS SYSTEM MAP & ALLOCATION DETAILS

