May 18, 2018

AAFC Admiral Dam & Downie Lake Dam
Contract No. 5
Low Level Gate System Replacement
CONTRACT #4547-928-7I4-0-C5

Addendum No. 3

1. Regarding Question/Answer #1 from Addendum No. 2 – "Does AAFC have a supplier in mind?" Please refer to the Technical Specifications, "Section 05 60 00 clause 02.01.14 – The sluice gate shall be as manufactured by Waterman, Hydro Gate or approved equivalent."

2. Regarding the Technical Specifications, "Section 01 35 43 clause 1.2.1 – "Aquatic Habitat Protection Permit (attached in Appendix A). See attached.

Natalie O'Neill
Senior Contracting Officer
Regina, Saskatchewan

Water Security Agency

June 20, 2017 (306) 787-2467

Terry Barkway
Water Security Agency
111 Fairford Street East
MOOSE JAW, SK S6H 7X9

File number: 2017-ENGINEERING SERVICES

Dear Mr. Barkway:

Re: Aquatic Habitat Protection Permit for Standard Engineering Services Work, Including Repair and Maintenance of Existing Structures – NEW

According to The Environmental Management and Protection Act, 2010, this permit is required prior to carrying out work in or near any water body or watercourse. This permit is for the standard engineering services works, including repair and maintenance of existing structures. Projects that are within fish spawning closures, channelization projects, any project where the alteration of the bed of the water body or watercourse are required (i.e. aquatic vegetation removal, addition of groins or other structures to the bed of the course, low level crossings), the creation of new water control structures or any project on WHPA Lands will require individual review and approvals. If the conditions of the attached permit cannot be met, the work will require individual assessment. Please note that the AHPP only covers work within the bed and bank when a structure is on First Nation Land, approval from DFO may be required before working on First Nations Land.

Please note both the **General Conditions** and those conditions applicable to the specific project involved must be complied with. Please ensure that any contractors working on the project receive a copy of this permit and comply with the appropriate conditions.

If the conditions of the attached permit cannot be met, this permit is no longer valid. Please contact this office so that further review and approvals may be carried out.

Prior to beginning work associated with this Aquatic Habitat Protection Permit, a Conservation Officer must be notified before each project. The Field Area Office to be contacted can be found in Appendix A.

Permit holders are reminded that the discharge of any substance that may cause an adverse effect or is covered by *The Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010* shall be reported to the Ministry of Environment (MOE) at 1-800-667-7525. Should you require more information on discharges and spills, please check Saskspills (http://www.saskspills.ca/about.asp) or the MOE website (\ http://www.environment.gov.sk.ca). You may also contact the MOE Client Service Office at 1-800-567-4224.

This Aquatic Habitat Protection Permit is valid only so far as the Water Security Agency is concerned and does not release you from the responsibility of obtaining any other approvals that may be required under federal, provincial or municipal legislation. The permit holder is responsible to obtain the necessary approvals from the local municipality for these improvements. Land control and access are also the responsibility of the permit holder.

If you have any questions in regards to this permit please contact me at (306) 787-2467 or at Tanya.Johnston@wsask.ca.

Sincerely,

Tanya Johnston
Supervisor, Aquatic Habitat Protection
Environmental and Municipal Management Services

Enclosure

cc: Kyle Drumheller, Conservation Officer Supervisor, Ministry of Environment, Beauval
Brock Lockhart, Conservation Officer Supervisor, Ministry of Environment, Creighton
Derek Keast, Conservation Officer Supervisor, Ministry of Environment, La Ronge
Warner Carlson, Conservation Officer Supervisor, Ministry of Environment, Southend
Randy Ross, Acting Conservation Officer Supervisor, Ministry of Environment, Meadow Lake
Dan Robinson, Conservation Officer Supervisor, Ministry of Environment, Loon Lake
Troy Thompson, Conservation Officer Supervisor, Ministry of Environment, North Battleford
Casey Howe, Conservation Officer Supervisor, Ministry of Environment, Prince Albert
Jeremy Johnson, Conservation Officer Supervisor, Ministry of Environment, Hudson Bay
Ryan Reimer, Conservation Officer Supervisor, Ministry of Environment, Nipawin
Steve Dobko, Conservation Officer Supervisor, Ministry of Environment, Saskatoon
Brett Diemert, Conservation Officer Supervisor, Ministry of Environment, Kindersley
Cam Lueken, Conservation Officer Supervisor, Ministry of Environment, Melfort
Braden Cherney, Conservation Officer Supervisor, Ministry of Environment, Moose Jaw
Kevin Fitzsimonds, Conservation Officer Supervisor, Ministry of Environment, Leader
Mark Dietz, Conservation Officer Supervisor, Ministry of Environment, Regina
Dan Sakal, Conservation Officer Supervisor, Ministry of Environment, Yorkton
Mario Gaudet, Conservation Officer Supervisor, Ministry of Environment, Melville
Rob Stolz, Conservation Officer Supervisor, Ministry of Environment, Moose Mountain Provincial Park

Water Security Agency

AQUATIC HABITAT PROTECTION PERMIT

Pursuant to Section 6 of *The Environmental Management and Protection (General) Regulations, 2010*, permission is hereby granted to Terry Barkway, Pat Laycock, Mike Hamilton, Doug Kozusko, Brad McClinton, Farooq Ashrafi, Ed Fredeen, Miachael McAllister, Derek Barnes, Kimberly Kusch, Nayeem Uddin, Bret Dundas, Amy Sweird, and Mel Szabo ("Permit Holder"), and any agents acting on behalf of the Permit Holder, to proceed with the standard engineering works and repair and maintenance of existing structures.

This permit is issued subject to and is restricted to the following conditions:

1. Works on WHPA lands is prohibited. A separate permit application will be required.

2. No excavation of the bed is allowed. A separate permit application will be required. The only exceptions are the excavation of excess silt to get channel to existing grade and when keying the toe of the slope for shoreline stabilization.

3. No substrate, rock and vegetation shall be removed, altered, disturbed or added to the bed with the exception of keying the toe of a slope for shoreline stabilization. A separate permit application will be required.

4. No works will occur during fish spawning timeframes (see Appendix B). A separate permit application will be required.

5. Works involving the creation of a new water control structure are not permitted. A separate permit application will be required.

6. The natural contour of the bank shall be maintained (ie. the natural path of channel will not be altered). A separate permit application will be required for channelization projects.

7. Works are occurring outside of the Species-at-Risk activity restriction guideline times (if applicable), or a mitigation plan has been developed for the site in question.

Culverts

8. Work shall be done under dry or frozen conditions. If the site is not dry or frozen, then work may occur, but only under isolated (de-watered site) conditions and flows must be bypassed around the work site (e.g. by damming and pumping). Heavy machinery and equipment may only be used below the bank if the work site has been isolated appropriately.

9. Coffer dams must be constructed of clean, non-erodible materials such as sand bags, Aquadam-type installations, steel or wood walls, concrete blocks, clean riprap, etc. Earthen fill material containing fine sediments shall not be used unless, prior to its placement within the watercourse, it is contained using a non-erodible material that will prevent the release of sediment contained therein. Once installed, cofferdams shall be appropriately sealed (e.g. lined with heavy gauge plastic, the bottom sealed with sand bags, etc), as required, to prevent the coffer dam structures from leaking.

10. Material for coffer dams must be obtained from outside the bed, bank or boundary of any watercourse or water body. Upon removal, coffer dam locations must be restored and stabilized to the approximate original width, depth and substrate of the watercourse or water body.

11. Culvert(s) must be appropriately sized to accommodate expected water flows and not result in the restriction of natural stream flow patterns.

12. Culvert(s) must be installed in a manner that will not result in it becoming perched or hanging.

13. Culvert(s) must be installed at or slightly below the natural watercourse bed elevation to maintain watercourse continuity. On fish-bearing waters, the culvert(s) must be embedded a minimum of 20% below the watercourse bed elevation to maintain watercourse continuity.

14. The culvert inlet and outlet must be adequately protected with rock rip-rap and/or an approved alternative to prevent erosion and scour of the bed and banks. Product such as broken/salvaged concrete and other debris is not permitted.

15. Any space between a culvert and the liner must be sealed with grouting material.

16. If grouting material cannot be fully contained, then the work must be carried out in isolation. Uncured grout must not enter the water body.

17. When removing and reclaiming a culvert crossing, the crossing site shall be restored to approximately the original width, depth and substrate of the watercourse and stabilized to prevent short and long-term erosion. The channel shall be restored so as to follow the natural watercourse contours.

18. Existing vegetation shall be retained outside of the isolated work area or outside of the road Right-Of-Way.

<u>Shoreline Stabilization</u>

19. Prior to re-contouring the bank, the work site must be adequately isolated by installing a turbidity curtain (or similar) to prevent sediment from migrating off the work site.

20. Sediment control measures (i.e. silt or turbidity curtain) must be appropriate to site conditions including expected water depth, wind and wave action and must be installed

around the perimeter of the work area before starting work and during in-water work to prevent re-suspended sediment from spreading to adjacent areas.

21. Sediment control measures will be regularly inspected and maintained or repaired if any damage occurs, and must be left in place following in-water activity until suspended sediment has settled and must be removed in a way that prevents the escape or re-suspension of sediments.

22. No earthen fill, sand or any other fines material shall be pushed into the water or deposited below the bank.

23. Fines will only be permitted above the bank and must be effectively contained so that it cannot erode into the lake.

24. The level of backfill material must be below the crest of the structure used for containment.

25. When contouring, material shall only be excavated via a pull-back method from the shoreline and stabilized in a manner that prevents it from eroding into any water body or watercourse.

26. Stabilization materials and methods used shall follow the natural contours and slope of the bank of the water body or watercourse.

27. To maintain shoreline stability, no rock shall be removed from the bed, bank or boundary of any water body or watercourse.

28. Any debris or terrestrial vegetation trimmed to facilitate shoreline stabilization shall be disposed of in a manner that prevents it from re-entering any water body or watercourse.

29. Rock rip rap shall be appropriately sized to withstand the forces of wave and ice action and follow the original contour of the shoreline and bank.

General Conditions

30. Machinery and heavy equipment must arrive at the project site clean and free of fluid leaks or accumulations of external contaminants that may include, but are not limited to: oil, fuel, grease, other lubricants, soils, mud or plant materials.

31. Machinery and heavy equipment must be cleaned fuelled, serviced and stored in a manner that will not contaminate the bed, bank or boundary of any water body or watercourse. During winter, machinery and equipment must not be fuelled or serviced on ice or in drainage ditches to prevent hazardous substances from contaminating water bodies or watercourses later in the year.

32. No machinery or heavy equipment is to enter the water under any circumstances. The only exceptions are the use of necessary attached booms, buckets, other tools, or implements.

33. To prevent sediment transport and maintain water flow, the work site must be isolated by installing appropriate sediment and erosion control measures.

34. Downstream water flow must be maintained (e.g. pumping, constructing a bypass channel, etc.) at all times for the duration of the project (i.e. water flows are not to be impeded.).

35. The bypass channel must be lined (e.g. geotextile fabric, plastic, rock, etc) to prevent it from eroding during its use. Once the works are complete, the bypass channel must be decommissioned and the site stabilized.

36. The discharge areas for all pumps must be armoured with clean rock, geo-textile fabric or some other energy dissipating device to prevent erosion and scouring of the watercourse bed and bank at the points of discharge.

37. If pumps are used within a fish bearing watercourse, they must be fitted with a screen consistent with the Fisheries and Oceans Canada *Freshwater Intake End-of-Pipe Fish Screen Guideline* (1995).

38. For any dewatering activities, water shall be released into a well-vegetated area or settling basin and not directly into the watercourse, provided the water is able to return to the watercourse after sediment has filtered out. Water entering the watercourse will be of equal or better quality than the receiving water.

39. Effective measures must be used to minimize any damage to the bed, bank or boundary of water bodies and watercourses from the transport and operation of heavy equipment. Machinery and heavy equipment must be located and operated from a stable location.

40. Rock rip rap, gravel and other excavated materials shall be obtained from outside the bed, bank and boundary of any watercourse or water body, with the exception of materials that need to be relocated as part of the project. These materials must also be clean and free from fine sediment or other contaminants.

41. Effective sediment and erosion control measures must be installed, monitored, maintained and replaced or upgraded as necessary prior to, during and following project completion to ensure they remain effective until the project site stabilizes and re-vegetates.

42. Excavated and stockpiled materials shall be located above the bank and stabilized so they will not erode into any water bodies or watercourses.

43. All disturbed project site areas including disturbed slopes or banks adjacent to any water body, shall be stabilized with short and long-term erosion control measures that have been tailored to site conditions.

44. All project debris, including any structures removed or replaced and temporary works must be removed and disposed of appropriately.

45. Adequate precautions must be taken to prevent debris and sediment from entering the water. Any project debris entering the water must be removed as soon as practical and disposed of in approved sites. It is unacceptable to bury or burn any debris on site.

46. Hazardous substances such as fuel, oil, grease, paint and solvents must be stored where they will not contaminate any water body or watercourse and be disposed of appropriately.

47. All contractors are to receive copies of all permits before they begin any work. A copy of the permit must be on site at all times and available for review by a Conservation Officer.

48. All spills of any oil, fuel, hydraulic fluids or waste dangerous goods must be immediately contained and reported to a Conservation Officer at the field location mentioned in Appendix A. All spills meeting or exceeding the quantities specified in the *Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010* must be reported and handled according to the regulations. The Provincial Spill Control Centre (Spill Line) is 1-800-667-7525.

49. A Conservation Officer shall be contacted at the field location mentioned in Appendix A prior to beginning this work so that the appropriate inspections may be conducted.

50. The Permit Holder is solely responsible for all design, safety and workmanship aspects of all works associated with this permit.

51. The Water Security Agency or the Ministry of Environment may order the Permit Holder to cease any or all work regarding this project if, in the Agency's opinion, the work is causing or may cause harm to the environment.

52. The Water Security Agency or the Ministry of Environment may order the Permit Holder to do any further work required to rectify any actual or potential problems that is deemed necessary to protect the environment.

53. The Permit Holder agrees to all conditions and/or orders regarding this permit.

54. This permit does not replace or supersede any approvals, licenses or authorizations, including building permits that may be required from municipal, provincial or federal legislation. The permit holder will maintain in force all such approvals, license or authorizations that may be required.

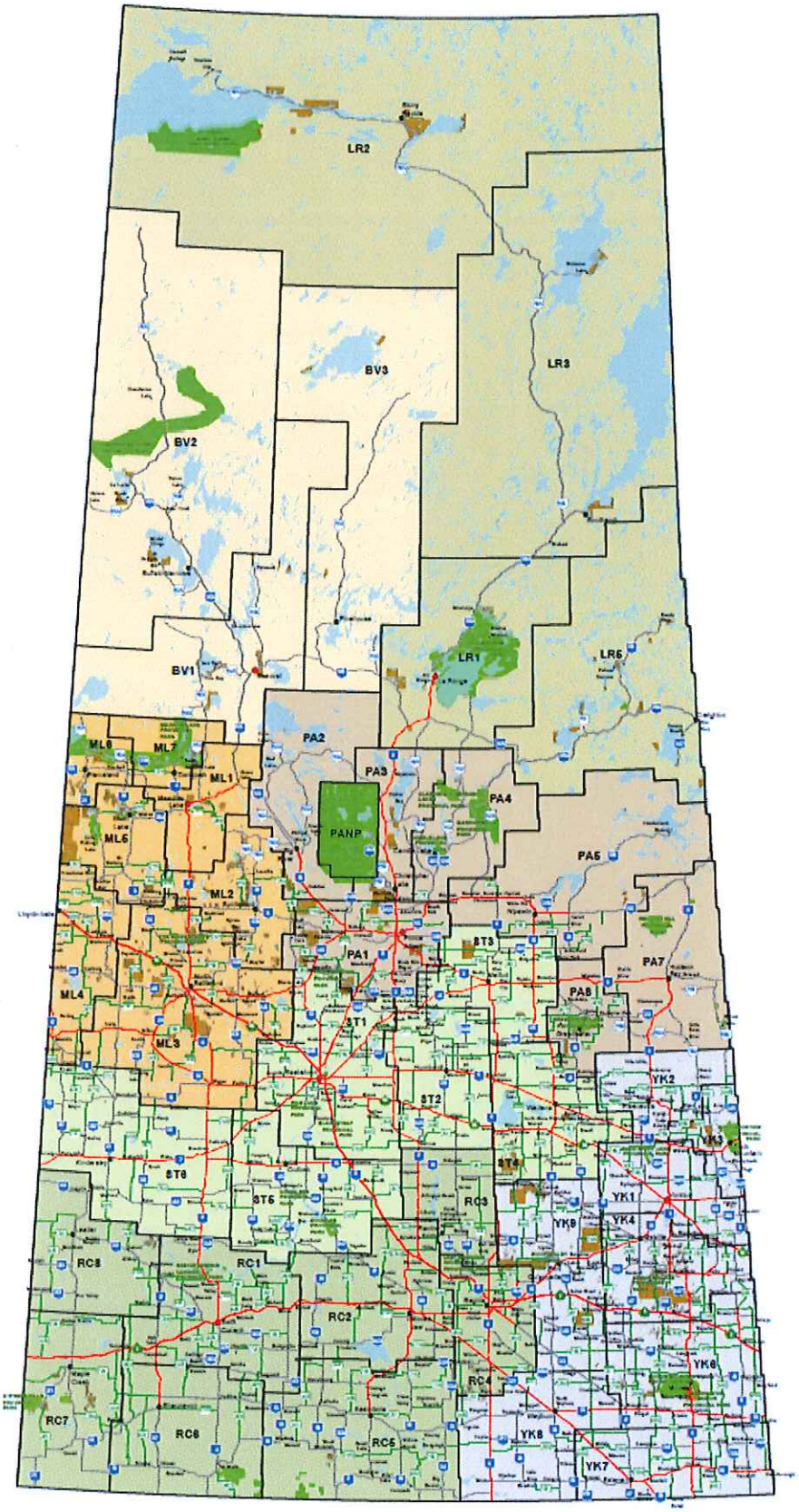
55. This permit will expire on **March 31, 2018**. Re-application is required if further work is planned.

Tanya Johnston
Supervisor, Aquatic Habitat Protection
Environmental and Municipal Management Services

Water Security Agency

Appendix A: Conservation Officer Field Office Phone Numbers

Office Name	Map Code	Phone Number
Beauval	BV1	(306) 288-4710
Buffalo Narrows	BV2	(306) 235-1740
Pinehouse	BV3	(306) 884-2060
La Ronge	LR1	(306) 425-4234
Stony Rapids	LR2	(306) 439-2062
Southend	LR3	(306) 758-6255
Creighton	LR5	(306) 688-8812
Meadow Lake	ML1	(306) 236-7557
Spiritwood	ML2	(306) 883-8501
North Battleford	ML3	(306) 446-7416
Lloydminster	ML4	(306) 825-6430
Loon Lake	ML5	(306) 837-2410
Pierceland	ML6	(306) 839-6250
Dorintosh	ML7	(306) 236-7680
Prince Albert	PA1	(306) 953-2322
Big River	PA2	(306) 469-2520
Christopher Lake	PA3	(306) 982-6250
Candle Lake Provincial Park	PA4	(306) 929-8400
Nipawin	PA5	(306) 862-1790
Hudson Bay	PA7	(306) 865-4400
Greenwater Provincial Park	PA8	(306) 278-3515
Saskatoon	ST1	(306) 933-6240
Humboldt	ST2	(306) 682-6726
Melfort	ST3	(306) 752-6214
Wadena	ST4	(306) 338-6254
Outlook	ST5	(306) 867-5560
Kindersley	ST6	(306) 463-5458
Swift Current	RC1	(306) 778-8205
Moose Jaw	RC2	(306) 694-3659
Rowan's Ravine Provincial Park	RC3	(306) 725-5200
Regina	RC4	(306) 787-2080
Assiniboia	RC5	(306) 642-7242
Shaunavon	RC6	(306) 297-5433
Maple Creek	RC7	(306) 662-5434
Leader	RC8	(306) 628-3100
Yorkton	YK1	(306) 786-1463
Preeceville	YK2	(306) 547-5660
Duck Mountain Provincial Park	YK3	(306) 542-5500
Melville	YK4	(306) 786-1463
Moose Mountain Provincial Park	YK6	(306) 577-2614
Estevan	YK7	(306) 637-4600
Weyburn	YK8	(306) 848-2344
Fort Qu'Appelle	YK9	(306) 332-3215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Water Security Agency

Appendix B: Fish Timing Windows of Saskatchewan

TIMING WINDOWS

Fisheries and Oceans Canada
Saskatchewan Operational Statement

Version 3.0

SASKATCHEWAN IN-WATER CLOSED CONSTRUCTION TIMING WINDOWS

Restricted activity timing windows have been identified for Saskatchewan lakes, rivers and streams to protect fish during spawning and incubation periods when spawning fish, eggs and fry are vulnerable to disturbance or sediment. During these periods, no in-water or shoreline work is allowed except under site- or project-specific review and with the implementation of protective measures. Restricted activity periods are determined on a case by case basis according to the species of fish in the water body, whether those fish spawn in the spring or fall/winter, and whether the water body is located in Northern, Central, or Southern Saskatchewan.

Timing windows are just one of many measures used to protect fish and fish habitat when carrying out a work or undertaking in or around water. Be sure to follow all of the measures outlined in the Operational Statements to avoid negative impacts to fish habitat.

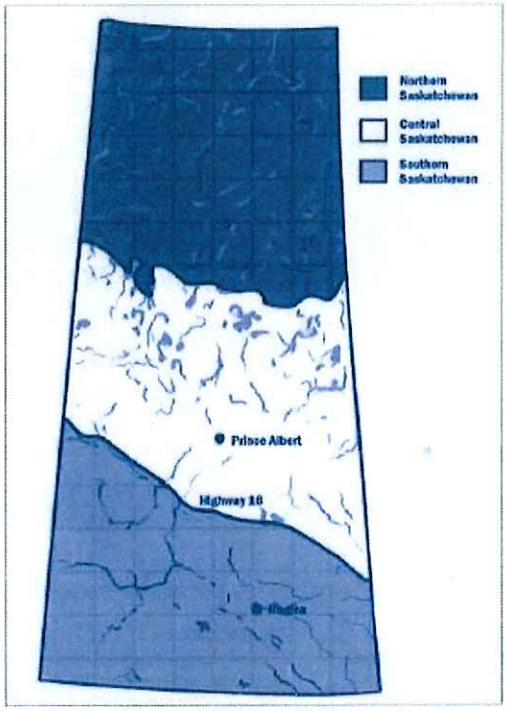

Figure 1:
Northern, Central, and Southern Saskatchewan boundaries for in-water closed construction timing windows.
(Note: Central Region includes the Churchill River).

How To Determine Timing Windows

1. Determine the fish species living in the water body where you wish to do work. Consult Saskatchewan Environment or your local Fisheries and Oceans Canada (DFO) office.
2. Determine if the fish living in the water body spawn in the spring or fall/winter according to Table 1. There may be one or both spawning types in any given water body. In Saskatchewan, essentially all lakes and streams contain one or more of the spring spawning fish listed, however far fewer contain fall/winter spawning fish.
3. Determine if the water body is located in Northern, Central, or Southern Saskatchewan according to Figure 1.
4. Use Table 2 to determine the in-water work timing restrictions according to the location of a water body (Northern, Central or Southern) and the type of fish found within (spring or fall spawners). During these periods, no in-water work (below the ordinary high water mark) is to occur without site- or project-specific review by DFO.

Table 1:
Common spring and fall/winter spawning fish.

Spring Spawning Fish		Fall/Winter Spawning Fish
Arctic Grayling	Rainbow Trout	Brook Trout
Bullhead	Sauger	Brown Trout
Goldeye	Smallmouth Bass	Burbot (winter)
Lake Sturgeon	Suckers	Cisco (Tullibee)
Mooneye	Walleye	Lake Trout
Northern Pike	Yellow Perch	Whitefish

Table 2:
Timing windows when no in-water work is to occur in order to protect spawning fish and developing eggs and fry.

Location	Spring Spawning Fish		Fall/Winter and Spring Spawning Fish	
	No Lake Sturgeon	Lake Sturgeon present	No Lake Trout	Lake Trout present
Northern Saskatchewan	May 1 – July 15	May 1 – July 31	October 1 – July 15	Sept. 1 – July 15
Central Saskatchewan	April 16 – June 30	April 16 – July 15	October 1 – June 30	Sept. 15 – June 30
Southern Saskatchewan	April 1 – May 31	April 1 – July 15	October 1 – May 31	Not Applicable