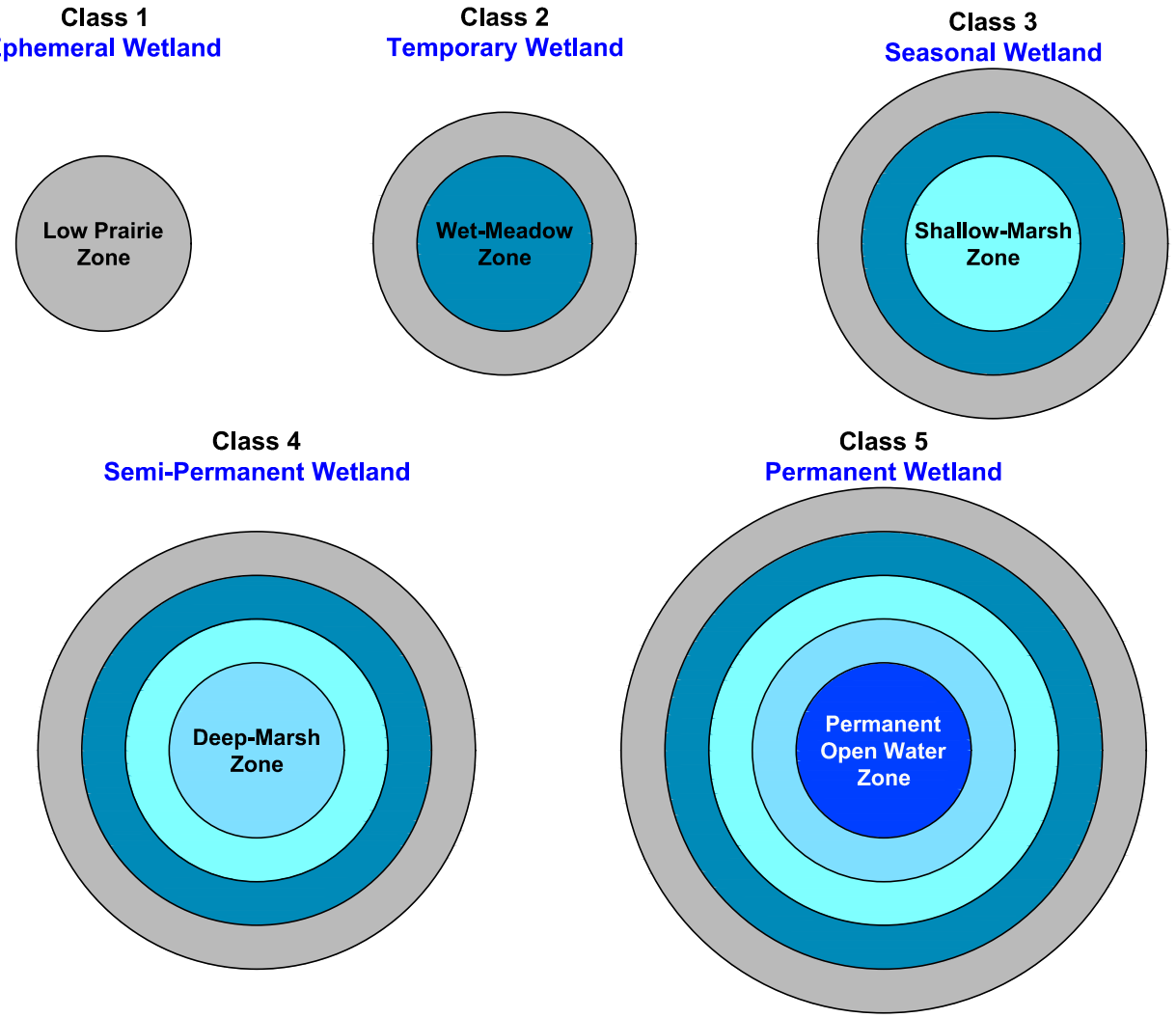
APPENDIX C
Prairie Wetland Classes and Vegetation Zones

APPENDIX C Stewart and Kantrud (1971) Wetland Classification and Ducks Unlimited Manitoba Wetland Classification Guide 2020

Wetland Class	Central Vegetation Zone	Description
Class I - Ephemeral Pond	Low-prairie	**Ephemeral ponds** have standing surface water for only a short period of time after snowmelt or storm events in early spring. Because of the porous condition of the soils, the rate of water seepage from ephemeral wetlands is very rapid after thawing of the underlying frost seal. Water is retained long enough to establish some wetland or aquatic processes. The soils show no hydric indicators. They are typically dominated by Kentucky bluegrass, goldenrod, asters, and other low prairie species.
Class II - Temporary Ponds	Wet-meadow	**Temporary ponds** are wetlands that are periodically covered by standing or slow-moving water. They typically have open surface water for only a few weeks after snowmelt or several days after heavy storm events. Water seepage is moderately rapid. Water is retained long enough to establish wetland or aquatic processes. The soils show no hydric indicators. They are dominated by wet meadow vegetation such as sedge, rush, cordgrass, and curled dock.
Class III - Seasonal Ponds or Lakes	Shallow-marsh	**Seasonal ponds** are characterized by shallow marsh vegetation, which generally occurs in the deepest zone. These ponds are usually dry by mid-summer. The soils show some hydric indicators, such as mottling. These wetlands are typically dominated by emergent slough grass, water plantain, and soft-stem bulrush.
Class IV - Semi-permanent Ponds or Lakes	Deep-marsh	**Semi-permanent ponds or lakes** are characterized by marsh vegetation, which dominates the central zone of the wetland, as well as coarse emergent plants and/or submerged aquatics. The soils show some hydric indicators, such as mottling and gleying. These wetlands frequently maintain surface water throughout the growing season, i.e., from May to September. Typical wetland vegetation includes hard-stem bulrush, common cattail, and duckweed.
Class V - Permanent Ponds or Lakes	Permanent Open-water	**Permanent ponds or lakes** exhibit permanent open water in a central zone that is generally devoid of surface vegetation. The soils in the deep, shallow, and wet meadow zones show some hydric indicators, such as mottling and gleying. Submerged plants may be present in the deepest zone, while emergent plants such as cattails are found along the edges. Plants commonly present in the open water zone of these wetlands include sago pondweed, hornwort, and bladderwort.
Class VI – Alkali Ponds or lakes	Intermittent Alkali	**Alkali ponds and lakes** are wetlands where deep water is not permanently present. These wetlands are characterized by a pH above 7 and a high concentration of salts. The dominant plants are generally salt tolerant and include red sapphire and spiral ditch grass (*Ruppia cirrhosa*). These wetlands are especially attractive for shorebirds.
Class VII – Fen Ponds	Alkaline Fen	**Fen ponds** are wetlands in which fen vegetation dominates the deepest portion of the wetland area. This wetland type often has wet meadow and low prairie vegetation present on the periphery. The soils are normally saturated by alkaline groundwater seepage. Fen ponds often have quaking or floating mats of emergent vegetation. Typical fen vegetation include sedges, dwarf birch, cotton-grass, arrowgrass, and northern bog violet.



Reference:

Matrix Solutions Inc.
ENVIRONMENT & ENGINEERING

Tundra Oil & Gas Limited
40 km Flowline Gas Gathering System

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Date:	Project:	Submitter:	Reviewer:
November 2021	29047-CH-21	L. Cochrane	D. Pirlot

Appendix C

APPENDIX C Wetland Summary within the Local Study Area

Type	Total Number of Wetlands or Waterways Identified within 25 m on Either Side of the RoW Boundary	Number of Wetlands or Waterways Impacted by Construction within the 20 m RoW boundary
Class I	75	34
Class II	152	77
Class III	65	37
Class IV	13	13
Class V	0	0
Seasonal Waterways (including Stony Creek)	5	4