

**MEMORANDUM OF UNDERSTANDING
IN SUPPORT OF IDENTIFYING POTENTIAL WETLAND REPLACEMENT PROJECTS
FOR PURPOSES OF WETLAND REPLACEMENT PROGRAM**

This Memorandum of Understanding is made effective the ____ of _____, _____.

BETWEEN:

HER MAJESTY THE QUEEN
in right of Alberta
as represented by the Minister of Environment and Parks
(the "Province")

-and-

XXXX

[NAME OF MUNICIPALITY]

(the "Municipality")

(collectively referred to as "Participants")

WHEREAS the Province recognizes that wetlands are a vital part of Alberta's ecological landscape and necessary for a sustainable economy and healthy communities, and has accordingly established the WRP to meet the outcomes of the Alberta Wetland Policy.

WHEREAS through the WRP the Province utilizes Fees paid by persons under the Wetland Restoration and Replacement Fee Ministerial Order (35/2018) to fund Wetland Replacement Projects across the province.

WHEREAS a priority of the Alberta Wetland Policy and the WRP is to replace wetland area and function in watersheds where permanent wetland disturbances have been approved under the *Water Act*, and Fees have been paid to the Province.

WHEREAS the Municipality wishes to undertake Wetland Replacement Projects in order to achieve specific environmental outcomes, including but not limited to flood attenuation, drought resiliency, groundwater recharge, water quality improvement, habitat for wildlife and biodiversity, and for social, recreational and educational value to the public.

WHEREAS the Municipality is able to ensure that each Wetland Replacement Project component, including wetland assessment, design, construction, inspection and adaptive management, is supervised and authenticated by an Authenticating Professional.

THEREFORE this MOU establishes a cooperative process to identify appropriate Wetland Replacement Projects for the purpose of the Participants entering into related Service Contracts to undertake those Wetland Replacement Projects.

1. DEFINITIONS, PRINCIPLES, NATURE AND PURPOSE OF MOU

1.1 Definitions – In this MOU including the recitals:

- (a) “Authenticating Professional” means a professional member who meets the requirements set forth in *Professional Responsibilities in Completion and Assurance of Wetland Science, Design and Engineering Works in Alberta*, as amended or replaced from time to time.
- (b) “Effective Date” means the date first written above.
- (c) “Fees” means fees that have been paid by persons under the Wetland Restoration and Replacement Fee Ministerial Order (35/2018) to fulfill their wetland replacement obligations.
- (d) “MOU” means this Memorandum of Understanding.
- (e) “Proposal” means a proposal document prepared by the Municipality containing the specific details of a Wetland Replacement Project.
- (f) “Proposal Submission Requirements” means the Province’s submission requirements for a Proposal, attached as Schedule “A” to this MOU.
- (g) “Service Contract” means a contract entered into between the Province and the Municipality in respect of one or more approved Proposals, as further described in section 6.1.
- (h) “Wetland Replacement Project” means a project to restore or construct wetlands within Alberta.
- (i) “WRP” means the Province’s Wetland Replacement Program.

1.2 Principles of MOU – This MOU is based on the following principles shared by the Participants:

- (a) wetlands are a vital part of Alberta’s ecological landscape and necessary for a sustainable economy and healthy communities; and
- (b) through working together, the Participants will help to achieve shared outcomes for wetland replacement.

1.3 Purpose and Nature of MOU –

- (a) The purpose of this MOU is to establish a process for the Participants to identify appropriate Wetland Replacement Projects to restore and construct wetlands within the Municipality’s boundaries. Service Contracts entered into between the Participants, as outlined in section 6.1, will provide details of the services and deliverables for specific Wetland Replacement Projects.
- (b) This MOU represents a statement of general intention on the part of the Participants and is not intended to create any legally binding obligations between the Participants, or impose specific financial responsibilities on the Participants. However, each Participant will be responsible for any costs it incurs through its participation in this MOU.

2. TERM

- 2.1 Term of MOU** – This MOU will take effect on the Effective Date and will be in effect for 3 years unless terminated earlier in accordance with the provisions of this MOU. The Participants may extend the term of this MOU by agreement of the Participants in writing.

3. RESPONSIBILITIES OF THE PROVINCE

- 3.1 Proposal Submission Requirements** – The Province may update the Proposal Submission Requirements from time to time, in which case the Province shall provide a written copy of the updated Proposal Submission Requirements to the Municipality, and the updated Proposal Submission Requirements shall supersede and replace the previous version.

3.2 Pre-Proposal Review Process –

- (a) After the Province has reviewed a summary document submitted by the Municipality under section 4.1 (“Summary Document”), the Province will set up a meeting with the Municipality to discuss the potential Wetland Replacement Projects identified in the Summary Document.
- (b) The Province may request a joint site visit with the Municipality of the sites identified in the Summary Document.
- (c) In consultation with the Municipality, the Province will advise which proposed Wetland Replacement Projects can be submitted to the Province in accordance with section 4.2. The Municipality acknowledges that such advice is not to be considered a formal approval of the Proposal as all submitted Proposals will need to still be formally approved by the Province under section 3.3.
- (d) The Municipality can bring forth any potential Wetland Replacement Project to the Province for pre-proposal review under this section at any time during the term of this MOU, regardless if it was or was not included in the Summary Document.

3.3 Approval of Proposals –

- (a) The Province will review and either approve or refuse Proposals submitted by the Municipality.
- (b) The Province may request additional information, clarification of, or amendments to Proposals submitted by the Municipality.
- (c) The Province will strive to review each Proposal within 30 days of its submission by the Municipality. The Province will advise the Municipality if a Proposal has been approved to proceed to a Service Contract.
- (d) In considering Proposals for approval, the Province will give priority to Wetland Replacement Projects that can be undertaken pursuant to the *Water Act* Code of Practice for Wetland Replacement Works.

4. RESPONSIBILITIES OF THE MUNICIPALITY

- 4.1 Communication of Potential Wetland Replacement Projects** – the Municipality will provide a brief written summary document to the Province by February 1 of each year that includes the following

information for the Municipality's potential Wetland Replacement Projects for the upcoming fiscal year (April 1 to March 31) :

- (a) the legal land location of each potential Wetland Replacement Project if available at time of summary submission;
- (b) estimate of combined costs for anticipated Wetland Replacement Projects (eg. under \$100,000; \$100k – 500k; \$500k - \$1M; \$1-2M; or \$2-3 M), if known;
- (c) the type of each Wetland Replacement Project (whether Restoration or Construction as defined in the Proposal Submission Requirements);
- (d) the anticipated authorizations that will be required for each Wetland Replacement Project (eg. *Water Act* Code of Practice versus *Water Act* approval; *Public Lands Act* approval) if known at the time of summary submission;
- (e) the anticipated total gain in wetland area that will be delivered by the potential Wetland Replacement Projects; and
- (f) a brief description of why the potential locations for Wetland Replacement Projects are being considered and value added considerations, examples of which are set out in section 6 of the Proposal Submission Requirements.
- (g) It is understood and acknowledged that the Municipality may not have a finalized list of specific Wetland Replacement Projects confirmed for the upcoming fiscal year at the time the summary document is submitted.

4.2 Submission of Proposals – the Municipality will:

- (a) submit a Proposal to the Province for each Wetland Replacement Project that the Municipality wishes to propose for the Province's approval;
- (b) ensure that each Proposal meets the Proposal Submission Requirements;
- (c) aim to submit at least one Proposal per year; and
- (d) only submit a Proposal to the Province if the Province has provided advice to proceed with submitting the Proposal under section 3.2.

4.3 Wetland Replacement Project Components – the Municipality will be responsible for completing all components of an approved Wetland Replacement Project, in accordance with the related Service Contract.

4.4 Legislative Requirements and Conservation Easements – The Municipality is responsible for ensuring:

- (a) that protection mechanisms such as conservation easements that add value to the long-term protection of the Wetland Replacement Project will be registered on titles as necessary to protect the wetland;
- (b) that all Wetland Replacement Projects approved by the Province meet or will meet applicable legislative requirements prior to project commencement, including but not limited to:

- (i) the requirements of the Code of Practice for Wetland Replacement Works;
 - (ii) obtaining any required regulatory authorizations under the *Water Act*, as applicable; and
 - (iii) obtaining any required regulatory authorizations under the *Public Lands Act* or other legislation as applicable; and
- (c) that all Wetland Replacement Projects are in compliance with all applicable federal, provincial and municipal legislation.

5. AGREEMENTS WITH AFFECTED LANDOWNERS AND THIRD PARTIES

5.1 Process for Agreements With Affected Landowners and Third Parties

- (a) Information to be Included in Proposal – To ensure that the Wetland Replacement Project as outlined in a Proposal has the agreement of affected landowners (“Landowners”) and third parties (“Third Parties”) to proceed in the location identified in the Proposal:
- (i) for Landowners (if any), the Municipality will obtain their preliminary written consent to complete the Wetland Replacement Project, and include in the Proposal
 - a. a copy of such consent(s);
 - b. the proposed compensation to be paid to the Landowner under a formal written agreement; and
 - c. the specific location of the Landowner’s land in relation to the Wetland Replacement Project as a whole; and
 - (ii) for Third Parties (if any), the Municipality will identify in the Proposal the nature of that Third Party’s interest in relation to the proposed Wetland Replacement Project and whether or not a formal written agreement will be required with the Third Party.
- (b) After Proposal Approved by Province – After a Proposal for a Wetland Replacement Project has been approved by the Province under section 3.3, but prior to entering into a Service Contract with the Province, the Municipality will enter into formal written Landowner and Third Party agreements it has identified as being required under (a), and will provide copies of such agreements to the Province once executed. The Municipality acknowledges that the Province will require such copies be provided prior to entering into a Service Agreement for a Wetland Replacement Project.

5.2 Landowner Agreements –

- (a) Content of Agreements – The Municipality will ensure that agreements with Landowners:
- (i) provide unrestricted access to the Municipality and the Province (notwithstanding the Province not being party to the agreement) to the lands required for the purposes of the Wetland Replacement Project, for a minimum of 10 years commencing on the effective date of the Landowner agreement (which should align as closely as possible to the projected start date of the Wetland Replacement Project);
 - (ii) address compensation to the Landowner (including amount and payment structure) for access to the Landowner’s lands;
 - (iii) address permissible activities within and immediately surrounding the wetland and timing of those activities;

- (iv) permit early termination by the Municipality if the related Service Contract is terminated prior to its expiry date;
 - (v) have a minimum 10 year term, commencing on or about the commencement date of the Wetland Replacement Project; and
 - (vi) contain an acknowledgement by the Landowner that:
 - a. any wetlands restored or constructed on the Landowner's lands as part of the Wetland Replacement Project are protected by the restrictions in the Alberta *Water Act* and are subject to the *Water Act* and any other applicable acts, and
 - b. that any future activity that may impact the Wetland Replacement Project will require a wetland assessment and will be subject to the Alberta Wetland Policy.
- (b) Payments Under Agreements –
- (i) The Municipality will ensure any payments payable under a Landowner agreement are for a reasonable amount that does not comprise a disproportionate amount of overall projects costs considering:
 - a. the nature of the activities to be undertaken on the lands;
 - b. the amount of access required for the Wetland Replacement Project; and
 - c. any continued or shared use of the lands by the Landowner for any purpose during each of the construction and maintenance phases of the Wetland Replacement Project (eg. lesser payments will likely be required where the landowner is continuing or sharing use of the lands, particularly in the maintenance phase).
 - (ii) The Municipality acknowledges that the Province will not compensate the Municipality for any payments payable under an agreement with a Landowner if a Service Contract is not entered into for the related Wetland Replacement Project. The Municipality will accordingly ensure that
 - a. the agreement is made subject to the condition precedent of the Municipality and the Province entering into a Service Contract for the Wetland Replacement Project to which the agreement relates, or
 - b. that payments are not payable under the agreement until a Service Contract for the Wetland Replacement Project has been entered into between the Municipality and the Province, and permits early termination by the Municipality without penalty if the related Service Contract is not entered into.
 - (iii) The Municipality acknowledges that the Province will only approve Landowner payments for the first 10 years of a Landowner agreement, notwithstanding that the Municipality may have negotiated or intends to negotiate a longer term for the Landowner agreement, and that any payments under a Landowner agreement extending past 10 years shall be the sole responsibility of the Municipality.
- (c) Compliance With and Registration of Agreements – The Municipality will take steps to address any Landowner non-compliance with a Landowner agreement, and ensure such agreements are registered by the Municipality against the certificate of title to the Landowner's land for the duration of the Landowner agreement.

6. SERVICE CONTRACTS

- 6.1 Service Contracts** – It is the intention of the Participants to enter into Service Contracts in respect of Proposals that are approved by the Province, subject to agreement of the Participants on the specific contractual terms of the Service Contracts. Service Contracts will provide details of the services, deliverables and funding for the specific approved Wetland Replacement Project to which the Service Contract relates.

7. AMENDMENT AND TERMINATION

- 7.1 Amendment of MOU** – This MOU may be amended at any time by agreement of the Participants in writing.
- 7.2 Termination** – Either Participant may terminate this MOU with 90 days written notice to the other Participant.

8. COMMUNICATION AND REVIEW OF MOU

- 8.1 Ongoing Communication** – The Province and the Municipality will communicate regularly by email, video conference or phone with regard to matters relevant to this MOU.
- 8.2 Annual Review** – To help ensure the effective implementation of this MOU, the Participants will have a meeting in person, by video conference or by phone to review this MOU once per year to examine the extent to which the objectives of this MOU are being met and make adjustments as required.

9. NOTICES

- 9.1 Notices** – Notices pertaining to this MOU will be provided in writing and delivered by emailed PDF. Each Participant respectively designates for the time being the individuals identified below as having authority to communicate to the other Participant any notice under this MOU. Either Participant may change the individual it has designated and other information below by giving notice to the other in the manner described in this clause.

the Province: Angela Burkinshaw
Director, Policy and Program Delivery
Email: AEP.WetlandContracts@gov.ab.ca
(with a copy to aep.wetlandreplacement@gov.ab.ca)

the Municipality: [NAME]
[TITLE]
[EMAIL]

10. GENERAL

10.1 General – The Participants agree:

- (a) that any reference to legislation shall mean that legislation as amended from time to time;
- (b) that this MOU may be signed in counterpart, in which case the counterparts together constitute one agreement, and communication of execution by e-mailed PDF shall constitute good delivery;
- (c) in this MOU words in the singular include the plural and words in the plural include the singular;
- (d) that this MOU does not affect any other responsibility, right or obligation of any Participant and addresses only their roles with respect to the implementation of this MOU; and
- (e) that nothing in this MOU fetters either of the Participant’s discretion or regulatory authority in any way.

THE PARTICIPANTS HAVE SIGNED THIS MOU ON THE DATES SET OUT BELOW:

**HER MAJESTY THE QUEEN in right of Alberta, as
represented by the Minister of Environment and Parks**

Per:

Kim Lalonde
Acting Executive Director
Lands Policy and Programs

Date: _____

THE MUNICIPALITY

Per:

Signature

Print Name

Position

Date: _____

PROPOSAL SUBMISSION REQUIREMENTS

This schedule sets out the Proposal Submission Requirements for Proposals submitted by the Municipality (also referred to in this schedule as “Project Proponent”) under the MOU for the purpose of the Province identifying and selecting appropriate Wetland Replacement Projects, which includes projects for **Restoration** and **Construction** in priority watersheds in Alberta. The Municipality is encouraged to select Wetland Replacement Projects that can be undertaken pursuant to the Code of Practice for Wetland Replacement Works as the Province will give priority to these types of projects.

Capitalized terms in this schedule shall have the same definition as in the MOU. The following additional definitions apply in these Proposal Submission Requirements.

DEFINITIONS

Restoration is the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historical area and functions to a former or degraded wetland. Restoration projects may involve one or both of the following:

- Re-establishment of the natural or historical hydrology and resulting wetland area of a drained or partially drained wetland by blocking drainage ditches, rendering tile drainage systems ineffective, or removing berms or infill; or
- Rehabilitation of a degraded or impaired wetland by re-contouring the topography and repairing soils and vegetation to restore wetland hydrology and historical hydrologic processes. Rehabilitation results in a gain in wetland function but not area, and rehabilitation when not combined with re-establishment will only be eligible in urban areas.

Construction is the manipulation of the physical, chemical, or biological characteristics of a site for the purpose of creating a wetland at a location that was historically upland or a non-wetland area. The following activities are examples of Construction:

- Construction of a new wetland area on an upland site;
- Retro-fitting portions of an existing storm water facility to create new functioning wetland area;
- Re-contouring a dugout or other excavated, non-wetland feature to create new functioning wetlands area; or
- Re-contouring upland areas adjoining wetlands to expand existing wetland areas.

Structure includes but is not limited to:

- A ditch plug;
- An earthen embankment;
- A grade control structure;
- A natural vegetated spillway;
- A reinforced grass spillway;
- A rock chute spillway, or
- An impermeable barrier.

General Background

The Province requires the Project Proponent to identify Wetland Replacement Projects it is proposing to carry out as a contractor for the Province for the purposes of the WRP, as set out in the MOU. For all Wetland Replacement Projects the Project Proponent wishes to be considered for approval, the Project Proponent must prepare and submit a Proposal that includes the information set out in these Proposal Submission Requirements.

If approved by the Province, the Proposal, and these Proposal Submission Requirements, will form part of a Service Contract to be entered into between the Province and the Project Proponent, subject to agreement

on the terms of the Service Contract. The Project Proponent will be responsible under the Service Contract for performing the services required to complete all components of the approved Wetland Replacement Project. Without limiting the scope of work to be performed, the Services under the Service Contract will include:

- site selection and determining the location of the Wetland Replacement Project;
- Wetland Replacement Project design and planning;
- responsibility for obtaining required access to the lands for the purposes of completing the Wetland Replacement Project through negotiated landowner agreements, and obtaining written consent of third parties as necessary;
- responsibility for obtaining all required regulatory authorizations;
- addressing existing utilities at the location of the Wetland Replacement Project as applicable;
- all services related to completion of wetland replacement works for the Wetland Replacement Project;
- monitoring during construction of the Wetland Replacement Project to confirm that it is executed according to the design plan;
- vegetation planting as required;
- any related activities required outside of the wetland boundary to complete the Wetland Replacement Project;
- annual monitoring and maintenance of the Wetland Replacement Project for the duration of the Service Contract; and
- assessing the wetland at the conclusion of the monitoring and maintenance period to confirm wetland delineated area, class, and any other necessary information.

Priority Area Designation

The WRP has assigned priority levels (high, medium and low) to watersheds based on the amount of recent and historical wetland loss that has occurred within its boundaries. The WRP uses the Hydrologic Unit Code (HUC) watersheds at two scales: HUC 4 and HUC 6, where HUC 4 watersheds are mostly larger than 500 square kilometers and HUC 6 watersheds are entirely nested within HUC 4 watersheds and mostly larger than 200 square kilometers. The WRP's designated priority areas will be posted on the Alberta Wetland Policy Implementation website.

Project Proponents should regularly review the most current priority areas as a guide to prioritize potential Wetland Replacement Projects that are within priority areas. Wetland Replacement Projects proposed in undesignated areas may not be approved due to limited available funds.

Each Proposal must include a map showing the location of the Wetland Replacement Project within the applicable priority area.

Regulatory Authorizations

If a regulatory authorization is required in order to undertake the proposed Wetland Replacement Project, the Project Proponent will be responsible to apply for and obtain all regulatory authorizations necessary for the Wetland Replacement Project, including but not limited to obtaining any authorizations and providing any notifications as required under the *Water Act* and the *Public Lands Act*. Project Proponents will need to independently determine and familiarize themselves with the regulatory requirements that will be applicable to the Wetland Replacement Project.

Project Proponents must be aware that the acceptance of a Proposal or the entering into a Service Contract with the Province does not guarantee the Project Proponent will receive any or all of the required regulatory authorizations. All applications made by the Project Proponent for the regulatory authorizations necessary to perform the Services will be reviewed by the appropriate regulatory authority on their merits in the same manner as any other application received by that regulator. Special treatment or consideration will not be provided to the Project Proponent.

Obtaining Regulatory Authorizations

The Project Proponent will have six months from the date a Service Contract is entered into with the Province to apply for all necessary regulatory authorizations. If the Project Proponent does not apply for all necessary regulatory authorizations within that 6 month period, the Province may terminate the Service Contract in accordance with its terms.

1. Project Design and Location

Each Proposal must include information on the project design and location of the Wetland Replacement Project, including:

- Project location information;
- Wetland Replacement Project design(s); and
- Ownership of the land, and any third party interests (eg. existing utilities) affected.

1.1 Project Location Information

Include the following project location information in the Proposal:

- a map with location of the Wetland Replacement Project;
- legal land location(s) of the Wetland Replacement Project;
- municipality that the Wetland Replacement Project is located within;
- Relative Wetland Value Assessment Unit of the Wetland Replacement Project;

- HUC 6 watershed¹ number and name; and
- HUC 4 watershed¹ number and name.

1.2 Wetland Replacement Project Design

Include the following project design information in the Proposal:

- a general description of the Wetland Replacement Project, including type of project (whether it is Restoration or Construction);
- the Restoration or Construction conceptual design plan;
- all regulatory authorizations that will need to be obtained by the Project Proponent to complete the Wetland Replacement Project;
- a current, high resolution aerial or satellite image clearly showing land conditions overlain with polygons of each proposed replacement wetland;
- a figure and table clearly showing the total increase in wetland area, in hectares, that will result from the Wetland Replacement Project. For partially drained wetlands, calculate only the gain in wetland area, and exclude the current wetland area that still persists on the site;
- for Restoration projects that will not result in a gain in wetland area, describe the current degraded condition and impaired functions of the wetland, how the project will restore those functions, and how the team will monitor and evaluate those functional improvements; and
- a general description of required construction activities to be undertaken to carry out the design of the Wetland Replacement Project.

1.3 Ownership and Land Uses

Include the following ownership and land use information for any lands that may be impacted by the Wetland Replacement Project in the Proposal:

- land ownership, including identification of any public lands;
- identification and ownership of permanent and naturally occurring bodies of water;
- claims, interests or leases held by third parties, including existing utilities, public lands dispositions, encumbrances registered against title, conservation easements, or other;

¹ Government of Alberta. 2017. Hydrologic Unit Code Watersheds of Alberta. Alberta Environment and Parks. June 1, 2017 https://maps.alberta.ca/genesis/rest/services/Hydrologic_Unit_Code_Watersheds_of_Alberta/

- preliminary written consent of landowners for the Wetland Replacement Project, if applicable in accordance with section 5.1 of the MOU;
- list of anticipated landowner and affected third party agreements required for the Wetland Replacement Project, and other information required in accordance with section 5.1 of the MOU;
- proposed land transfers of donated land, or registrations against land titles (e.g., landowner agreement at a minimum, or conservation easements, environmental reserve designations), that will protect the wetland during and after completion of the Wetland Replacement Project; and
- the current and post-replacement land use category(ies) within each of the following areas, according to the categories listed in Table 1:
 - **Upland zone of influence** (for both Restoration or Construction projects) – 100 meters (m) from the boundary of the proposed replacement wetland. If multiple basins are being restored on the property, list all land uses on the property within 100 m of each proposed replacement wetland;
 - **Wetland edge** (if Restoration) – within the historical edge of the wetland boundary, if applicable; and
 - **Within the wetland** (if Restoration) – within the historical wetland boundary.

Table 1. Land Use Categories

Pavement / impermeable surface	Moderate grazing by livestock
Commercial Right of Way	Mowed or hayed, but uncultivated
Private Right of Way or unpaved driveway	Light grazing by livestock
Heavy grazing by livestock	Conservation easement
Annual crop production	Fallow, no cultivation or livestock for less than 10 years
Generalized soil disturbance	Undisturbed for 10 to 20 years
Residential or commercial lawn	Undisturbed for 20 years or more
Dry year crop production	Other – Requires description

2. Determining Ecological Suitability

The following categories address the ecological suitability of a Wetland Replacement Project. Include information pertaining to each of these areas in the Proposal in accordance with the requirements set out below.

- Hydrology;
- Soil Information;
- Wetland Connectivity;
- Wetland Diversity;
- Project Constraints; and
- Site Visit Observations.

2.1 Hydrology

Hydrology is the primary driver of successful wetland Restoration or Construction. In Restoration, hydrology needs to be re-established, whereas in Construction a reliable water source is required to establish hydrology. Include the following information on hydrology in the Proposal:

- map(s) or figure(s) depicting the catchment area and drainage pathways of the replacement wetland;
- the water source and discharge point for the replacement wetland, including any proposed shallow groundwater and/or surface water connections to existing waterbodies; and
- classifications of the water regimes in the normative state (prior to anthropogenic disturbance), current state, and post-replacement state. The water regime refers to the surface water permanence in the deepest part of the wetland in most years, and can be classified as follows (adapted from Cowardin, et al²):
 - not flooded (less than 1 week flooded);
 - temporarily flooded (1 – 4 weeks flooded);
 - seasonally flooded (5 – 17 weeks flooded);
 - semi-permanently flooded (18 – 40 weeks flooded);

² Cowardin, L. M., V. Carter, F. C. Golet and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, DC, Jamestown, ND: Northern Prairie Wildlife Research Center. Available at: <http://www.npwrc.usgs.gov/resource/wetlands/classwet/>

- intermittently exposed (41 – 51 weeks flooded); or
- permanently flooded (52 weeks flooded).

2.2 Soil Information

The existing topography and soil conditions will influence the potential to establish hydrology, as well as landscape factors such as the connectivity to other wetlands and adjacent upland habitat. Include, at a minimum, the following information on soils in the Proposal:

- AGRASID soil polygon identification and parent material information;
- Soil Landscapes of Canada polygon identification; and
- any relevant information from previous soil assessments in the Wetland Replacement Project area, if available.

2.3 Wetland Connectivity

Include the following information on surface connectivity of wetlands in the Proposal:

- land uses and ownership classification (e.g. private, public, park, etc.) of the adjacent parcels of land surrounding the Wetland Replacement Project,
- a description of habitat quality and natural corridors connecting the Wetland Replacement Project to adjacent habitat and wetlands;
- a map depicting the approximate boundaries of any existing wetlands within 800 m of the proposed Wetland Replacement Project;
- the total area of wetlands within an 800 m radius; and
- any existing buffers with native perennial vegetation adjoining the Wetland Replacement Project, including both the percentage around each wetland and the average buffer width.

2.4 Wetland Diversity

Variability in conditions within and between wetlands increases the available habitat and biodiversity.

Include the following information related to wetland diversity in the Proposal:

- classification of each wetland as per the Alberta Wetland Classification System Guide (see Table 3 of Guide for reference). Include a description of the dominant normative, current and post-replacement wetland zones, including any historical wetland areas prior to anthropogenic disturbance (normative conditions); and
- identify the number of wetland zones that will exist within 100 m of the Wetland Replacement Project.

2.5 Project Constraints

Include in the Proposal a description of any potential project constraints that may impact the ability to carry out the Wetland Replacement Project, and mitigation strategies to address those constraints. Constraints may include, but are not limited to, the following:

- poor suitability of soils or limiting soil conditions;
- water quality issues;
- presence of historical resources;
- presence of Noxious or Prohibited Noxious weeds (as defined by the Alberta *Weed Control Act*);
- presence of sensitive species;
- third party interests, such as pipelines, transmission lines, dispositions, public interest, etc.;
- presence of wells, dugouts, existing *Water Act* authorizations or other water bodies that may impact downstream landowners;
- floodplains, floodways or other flooding considerations;
- federal lands, Native Reserve lands or Settlements;
- any additional authorizations or approvals required;
- structures requiring operation or regular maintenance (e.g. control gates); or
- any other constraint not listed above

2.6 Site Visit Observations

Include relevant information gathered from a site visit in the Proposal, such as the following:

- map(s) with spatially referenced locations of key information, including:
 - ditches,
 - locations of headcuts,
 - soil and vegetation sampling locations,
 - proposed location of replacement works, and
 - elevation data, if collected.
- a brief description of available soils for the replacement works, including salvageable topsoil material and proposed location and estimated quantity of suitable material for construction of restoration structures, (e.g., ditch plugs);

- a brief description of the existing vegetation, including the identification of Noxious and Prohibited Noxious weeds (as defined by the *Alberta Weed Control Act*);
- confirmation of water sources and drainage pathways;
- several photographs of the site, including the overall wetland footprint, ditches, and headcut locations;
- a description of any opportunities or additional constraints observed during the site visit that may be important considerations for the Wetland Replacement Project design; and
- any other relevant observations.

3. Monitoring and Maintenance Plan

The Project Proponent must include a Monitoring and Maintenance Plan within the Proposal to detail how they will undertake the monitoring and maintenance phase of the Wetland Replacement Project (“Monitoring and Maintenance Phase”) to meet the objectives outlined below. Within the Monitoring and Maintenance Plan, the Project Proponent must include, in plan view, a Wetland Monitoring Map of the proposed transects and sampling plot locations (hydrology and vegetation) as required in Section 3.2.

There are five required elements that must be addressed in the proposed Monitoring and Maintenance Plan and carried out during the Monitoring and Maintenance Phase of the Wetland Replacement Project:

- Annual Inspection and Maintenance of Structures;
- Annual Monitoring Requirements and Performance Standards;
- Post-Construction Maintenance Requirements;
- Annual Monitoring Report; and
- Final Verification Letter.

3.1 Annual Inspection and Maintenance of Structures

If a Structure is proposed as part of the Wetland Replacement Project, the Project Proponent shall conduct an annual visual inspection by July 31 for each year of the Monitoring and Maintenance Phase, and undertake maintenance of the Structure(s) as required for their continuing functionality as per the Code of Practice for Wetland Replacement Works or the *Water Act* Approval, including:

- the Structure;
- contouring;
- erosion and sediment control;
- soil amendments;
- vegetation amendments;

- weed control; and
- decommissioning of subsurface drainage works.

The Project Proponent shall note the general condition of the Structure(s) and record any areas of concern or maintenance required or undertaken to maintain the Structure(s) as designed, including, but not limited to, sediment and erosion control, additional vegetation planting, or additional soil compaction and grading.

3.2 Annual Monitoring Requirements and Performance Standards

The Project Proponent shall monitor the replacement wetland annually for four consecutive years after the construction phase of the Wetland Replacement Project has been completed. The Project Proponent must perform each of the monitoring requirements described in 3.2.1 through 3.2.3 and target the performance standards described in 3.2.4 of this section (“Performance Standards”). All annual monitoring and Performance Requirements shall be completed by July 31 for each year of the Monitoring and Maintenance Phase, and annual monitoring data collected must be compiled and summarized in the Annual Monitoring Report as described in section 3.4.

3.2.1 Hydrology Monitoring

The Project Proponent must measure inundation and saturation at a minimum of one stationary point annually, during the growing season to confirm hydrology Performance Standards are met. Depending on the wetland design, additional hydrology monitoring locations may be warranted. The hydrology monitoring point(s) must be shown on the Wetland Monitoring Map and any change in location during the Monitoring and Maintenance Phase must be communicated with AEP.

If inundation cannot be determined during the annual monitoring inspection then an additional inspection earlier in the growing season and/or remote monitoring options may be required to demonstrate the hydrology Performance Standards have been achieved. A local resource, such as the landowner, may be used to perform hydrology measurements provided the Authenticating Professional receives adequate information to complete the sign off of the Annual Monitoring Report referred to in section 3.4. The Project Proponent must include on the Wetland Monitoring Map the location of the proposed hydrology sampling location(s).

3.2.2 Vegetation Monitoring

The Project Proponent must sample vegetation in plots located along transects once between July 1 and August 31 of each year of the Monitoring and Maintenance Phase. If multiple basins are restored within one Wetland Replacement Project, transects can be completed within a subset of representative wetlands. The Project Proponent must include on the Wetland Monitoring Map the proposed vegetation transect locations.

The Project Proponent must:

- establish an appropriate number of transects evenly space apart to adequately represent the wetland. Transects must radiate from the wettest zones to driest, if feasible and must have the same fixed location (start and end point) throughout the entire Monitoring and Maintenance Phase;
- determine an appropriate number of sample plots along each transect to adequately represent the wetland and its vegetative zones (e.g. shallow marsh, wet meadow, upland). Sample plots must be place at a fixed distance along each transect, or placed within definitive wetland zones to ensure representation of that particular zone. Once sample plot locations have been selected, the plot location will be fixed for the duration of the Monitoring and Maintenance Phase;
- identify the location of transects and plot locations in the monitoring report on the Wetland Monitoring Map showing the location of wetland classes and zones;
- mark each transect and sample plot location by GPS and resample in the same sample plot location each year of the monitoring program. If the sample plot location is not representative in that year of monitoring, note the change and add an additional sample plot (marked by GPS) that is representative;
- ensure a qualified individual, able to identify plants to genus and species, conducts the wetland vegetation monitoring;
- sample the:
 - herbaceous layer (all non-woody plants and woody plants less than 1 m in height) using a one square meter sample plot;
 - the shrub layer using a 5 -metre radius sample plot; and
 - the tree layer using a 10-metre radius sample plot;
- record the data for each herbaceous layer within each sample plot, including a list of all living plant species, and an estimate of percent cover in five (5) percent intervals for each species. The percent cover of wetland vegetation species in each sample plot shall be averaged for all plots to obtain a mean percent cover value for each species within the wetland;
- determine the total percent cover of vegetation (regardless of species and stratum), bare soil, and open water for each sample plot, when viewed from above. Total percent cover cannot exceed 100 percent. The percent cover of each cover type in each sample plot shall be averaged for all plots to obtain a mean percent cover value for each cover type for the wetland;
- when woody plantings have been completed as part of the Wetland Replacement Project, record the number and species of surviving and established trees and surviving and established shrubs for each 5 and 10-metre radius plot;
- data for each plant species observed must include the common name, scientific name, wetland indicator status, and whether the species is considered native according to the Alberta Conservation Information Management System (ACIMS) (Alberta Environment and Parks 2017). Nomenclature shall follow in ACIMS found at

<https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/download-data/>; and

- use the U.S. Army Corps of Engineer’s “National List of Vascular Plant Species That Occur in Wetlands” that is most applicable for the region the Wetland Replacement Project is located within to identify wetland species listed as facultative and wetter. This can include the Western Mountains, Valleys, and Coast Region, the Great Plains, and/or the Northcentral and Northeast Regional Supplements.

3.2.3 General Wetland Monitoring Requirements

The Project Proponent must:

- remove or destroy invasive plant species that are listed as prohibited noxious weeds in Alberta according to Alberta’s Weed Control Regulations under the *Weed Control Act*;
- collect photos of the wetland from the same locations (photo stations) during each annual monitoring inspection. At a minimum, photo stations shall be located at both ends of each transect and one general overview photo showing the entire wetland. Photos must be labeled with the location, date photographed, and direction;
- delineate any bare soil areas, erosion or sedimentation, areas dominated by invasive species, and areas without a predominance of wetland vegetation which are considered problematic in achieving the wetland replacement outcomes and provide their location on the Wetland Monitoring Map;
- document any incidental sightings or evidence of wading birds, songbirds, waterfowl, amphibians, reptiles, other wildlife use (lodges, nests, tracks, scat, etc.), and human use within the wetland;
- conduct a visual inspection of the Wetland Replacement Project and record any observations of impacts which may be detrimental to the wetland. This could include oil, grease, man-made debris, and any other visible contaminations or concerns;
- provide a written summary of all the problem areas that have been identified within the replacement wetland and potential corrective measures to address them, or any measures that were undertaken to address them;
- in Years 2, 3 and 4 of the Monitoring and Maintenance Phase, provide in the Annual Monitoring Report referred to in section 3.4 a written summary of data from the previous monitoring year(s) and a discussion of changes or trends based on all monitoring results. Include an updated Wetland Monitoring Map showing the approximate locations of wetland zones and identify if the wetland is on a trajectory to achieving the amount of wetland area required. The Annual Monitoring report must also state whether the Performance Standards have been met, are on a trajectory to being met, or if there are issues which require adaptive management in order to be achieved by the end of the Monitoring and Maintenance Phase; and
- only in Year 4 of the Monitoring and Maintenance Phase, complete a wetland delineation in accordance with the Wetland Identification and Delineation Directive and include a calculation of the hectares of the Wetland Replacement Project established, a plan view

drawing (the Wetland Monitoring Map) depicting each wetland class to type level and plant community zones.

3.2.4 Performance Standards

The Project Proponent must evaluate the Wetland Replacement Project based on the goals and objectives of the project, including the intended function as designed.

The Project Proponent must report on all of the following Performance Standards annually within the Annual Monitoring Report referred to in section 3.4:

- the Project Proponent must choose one of the following hydrologic performance standards to ensure the replacement wetland is characterized by the presence of water at a frequency and duration sufficient to support a predominance of wetland vegetation and the wetland class specified at the end of the monitoring period. Visual confirmation during annual inspections, air photo review, remote monitoring and/or other methods as approved by the Province may be used to demonstrate success:
 - soil saturation within 30 cm of the soil surface for 14 consecutive days during the growing season or inundation for 14 consecutive days during the growing season; or
 - for projects that have specific target hydroperiod, evidence the hydroperiod was achieved (e.g. # of weeks of inundation).
- the Project Proponent must target the following vegetation Performance Standards during the Monitoring and Maintenance Phase and complete adaptive management to address each by the end of the monitoring period. The Project Proponent must ensure the replacement wetland at the end of the Monitoring and Maintenance Phase meets the following:
 - has a mean percent cover of at least 60% native wetland species in the herbaceous layer (an alternative percent cover standard may be proposed for review and approval by the Province);
 - does not have extensive areas of problematic bare soil that exceed five percent of the replacement wetland area;
 - does not have greater than 25% coverage of open water without emergent vegetation and/or rooted floating vegetation relative to the total wetland area, unless the wetland class being restored or constructed is a shallow open water wetland;
 - supports a diversity of wetland plant species where no single native species or two native species combined represent more than 75% of the total plant cover within the wetland;
 - does not have more than fifteen (15) percent total cover of invasive species including, but not limited to, *Phalaris arundinacea* (reed canary grass). Invasive species shall not dominate the vegetation in any extensive area of the replacement wetland. Note that the Project Proponent can request to change

this percentage target depending on existing site baseline conditions. If it is unfeasible to meet the mean percent cover of invasive species of fifteen (15) percent or less within the replacement wetland or if there are extensive areas of the replacement wetland in which an invasive species is one of the dominant plant species, the Project Proponent must provide:

- an assessment of the problem,
 - a control plan, and
 - an alternative percent cover standard that can be achieved for review and approval by the Province.
- For swamp classes where woody vegetation planting has occurred, the Project Proponent must ensure the replacement wetland at the end of the monitoring period targets the following vegetation Performance Standard(s) based on extrapolated survivorship observed during monitoring:
 - for wooded swamps, seven hundred fifty (750) individual surviving, established, and free-to-grow trees per hectare that are classified as native wetland species and consisting of at least three different species; or
 - for shrubby swamps, seven hundred fifty (750) individual surviving, established, and free-to-grow shrubs per hectare that are classified as native wetland species and consisting of at least three different species.

If the replacement wetland does not satisfactorily meet the above Performance Standards by the end of Year 4, or is not satisfactorily progressing during Years 2 and 3, the Project Proponent will be required to take corrective actions. Other performance standards may be considered with approval from the Province. If there are climate / hydrology considerations that have impacted vegetation growth (i.e drought or flood conditions), the Project Proponent must notify the Province as soon as possible to discuss any additional corrective measures that may be required.

3.3 Post-Construction Maintenance Requirements for Wetland Replacement Project

The Project Proponent must additionally include in the Annual Monitoring Report referred to in section 3.4 a list of post-construction maintenance measures the Project Proponent may carry out for the Wetland Replacement Project to correct any impairments that will or may prevent the wetland from meeting the class, area or functions of the wetland as designed. Such measures may include, but are not limited to:

- additional vegetation planting;
- weed management;
- soil amendments; and
- re-contouring basin topography as required.

3.4 Annual Monitoring Report

A key deliverable of the Monitoring and Maintenance Phase is the submission of an Annual Monitoring Report to the Province every year which compiles and summarize all annual data collected during each year of the Monitoring and Maintenance Phase.

The Project Proponent shall submit an Annual Monitoring Report to the Province annually on or before November 30 of each year of the Monitoring and Maintenance Phase.

Each Annual Monitoring Report must be signed and stamped by the Authenticating Professional and must include a summary of the following activities:

- results of annual inspection and maintenance performed on structures (section 3.1 above, if applicable);
- results of the annual wetland monitoring and Performance Standards (section 3.2 above), including:
 - hydrology monitoring;
 - vegetation monitoring;
 - general monitoring; and
 - Performance Standards
- any post-construction maintenance measures undertaken to address issues with structures, wetland establishment or function as designed (section 3.3).

All Annual Monitoring Reports should be concise and provide clear information for the Province to evaluate the performance of the Wetland Replacement Project and to ensure the replacement wetland is on a trajectory to meet its design specifications. A brief summary of the original Wetland Replacement Project is all that is necessary in the Annual Monitoring Reports. Submission of lengthy Annual Monitoring Reports that contain mostly generalized information and extensive background information on the Wetland Replacement Project is not required and should be avoided.

3.5 Final Verification Letter

The Project Proponent shall provide to the Province a Final Verification Letter stamped and signed by an Authenticating Professional to confirm that the Wetland Replacement Project has established according to the wetland area, class and function anticipated in the approved design plans.

The Final Verification Letter must be included with the final Annual Monitoring Report provided in Year 4 of the Monitoring and Maintenance phase, and must delineate the boundary of the established replacement wetland according to the wetland field identification and delineation process within the Alberta Wetland Delineation Directive.

The Project Proponent must provide the delineated boundary as a shapefile and include the boundary and total area, in hectares on a plan view within the Annual Monitoring Report.

4. Project Schedule

The Proposal must include a detailed work plan outlining the following:

- the intended processes and workflows for the proposed Wetland Replacement Project;
- time estimates for completion of each project component within each phase; and
- a detailed schedule for the overall project.

In addition, include in the Proposal a copy of the **Pricing Form** attached as Appendix “1” to this schedule setting out the services, deliverables and costs; pricing; number of ha restored through the Wetland Replacement Project; and anticipated start and completion dates of each phase of the Wetland Replacement Project. Provide the actual date of start and/or completion if a phase has already been started or completed prior to the date the Proposal is submitted..

5. Project Costs

Costs in respect of a proposed Wetland Replacement Project will only be paid through a Service Contract entered into between the Province and the Project Proponent for an approved Wetland Replacement Project. Wetland Replacement Project costs that the Project Proponent wishes to propose for inclusion in a related Service Contract must be included in the Proposal. **All costs proposed by the Project Proponent in its Proposal for inclusion in a Service Contract are subject to the Province’s review and approval.**

The Project Proponent must include a summary of the work to be completed and specify costs in the Pricing Form (Appendix 1), which includes a detailed breakdown of the services, deliverables, and costs for each of the following four phases of the proposed Wetland Replacement Project:

- Phase 1: Wetland Replacement Project Selection;
- Phase 2: Design and Regulatory Authorization;
- Phase 3: Construction; and
- Phase 4: Monitoring and Maintenance.

A description of eligible costs under each of these phases is provided below.

5.1 Phase 1: Wetland Replacement Project Selection

The Wetland Replacement Project Selection Phase costs include reasonable costs directly related to initial identification of a suitable Wetland Replacement Project, as set out below.

5.1.1 Site Selection Costs

Site selection costs shall not exceed \$20,000 per Wetland Replacement Project, unless otherwise pre-approved in writing by the Province. Site selection costs includes activities such as:

5.1.1.1 Staff time and consulting fees associated with initial targeting of potential Wetland replacement Projects, such as:

- pre-proposal requirements (meetings, joint site visits);
- office level mapping and identification of drained wetlands;
- landowner engagement;
- marketing and communication materials (specify materials produced and costs);

5.1.1.2 Costs for materials and equipment associated with office level targeting and initial landowner engagement (specify materials and equipment), such as:

- trucks,
- ATVs,
- Survey equipment, etc.

5.1.1.3 Staff costs and consultant fees associated with site selection and securement of Wetland Replacement Project, such as:

- communication and negotiation processes with the relevant landowners and third parties;
- materials and equipment required for landowner engagement and preliminary site visits (specify materials and equipment and charge out rates, e.g. trucks, survey equipment etc.); and
- preparation and writing of the Proposal.

5.1.2 Projects That Did Not Proceed

Reasonable costs previously incurred by the Project Proponent for potential Wetland Replacement Projects **that did not proceed** (for reasons such as landowner withdrawal, third party permissions not attained, contaminated site issues, non-compliance issues, or not approved by the Province) may be eligible for reimbursement by the Province. For such costs to be considered by the Province for inclusion for reimbursement in a Service Contract for an approved Proposal:

- the potential Wetland Replacement Project(s) that did not proceed should be located within the same priority area or watershed as the Wetland Replacement Project proposed in the Proposal,
- the costs must have been incurred in the 24 months preceding the submission date of the Proposal, and

- The Project Proponent must:
 - set out the costs in detail,
 - include a brief description of the Wetland Replacement Project(s) pursued to which the costs relate (including the specific geographical location), and
 - provide the reasons for not proceeding with such project(s).
 - confirm that the failed project costs have not been included in any other Proposal or previously reimbursed by the Province.

5.2 Phase 2: Design and Regulatory Authorization

The Design and Regulatory Authorization Phase costs include the Project Proponent's costs for all tasks, services and deliverables associated with the design and regulatory authorization phase of the Wetland Replacement Project, including but not limited to the following:

- development of detailed Construction or Restoration design plans and drawings for the Wetland Replacement Project, including professional fees and other costs for:
 - site evaluation of existing conditions, including field assessments and elevation surveys of the adjacent land and existing and proposed wetland boundaries with a survey-grade laser level, at a minimum;
 - plan and cross-sectional view drawings of the Wetland Replacement Project with georeferenced locations of ditch plugs, weirs, vertical grade control structures, spillways, and any other structures or significant features;
 - engineering drawings of structures, if required; and
- obtaining applicable regulatory authorizations, including but not limited to providing *Water Act* Code of Practice notification, and obtaining regulatory authorizations under the *Water Act* or *Public Lands Act*.
- cost of Registering landowner agreement against Title.

5.3 Phase 3: Construction

Construction Phase costs include a detailed breakdown of the Project Proponent's costs for all tasks, services and deliverables associated with the construction phase of the Wetland Replacement Project, including but not limited to the following:

- equipment required (e.g., backhoe, excavator, dozer, skid steer);
- equipment mobilization costs;

- equipment operator costs for installing replacement works, vertical grade control structures, rock spillways, berms, or any other structure, or for constructing a wetland via excavation and recontouring;
- costs for erosion and sediment control structures;
- costs for seeding, planting, amending soils, placing woody debris or other activity;
- weed removal and management costs;
- construction supervision (number of hours and hourly rate);
- payment to landowners (landowner payments shall not be paid in advance of the Province and the Project Proponent entering into a Service Contract);
- activities or infrastructure located outside of the wetland Restoration or Construction area but that will directly increase overall functions of the Wetland Replacement Project (e.g., vertical grade control structures downstream of outlet, or Restoration of upland area adjoining the wetland, up to a distance of 10 m from the wetland boundary). If costs for Restoration activities or infrastructure located within upland areas are included, describe how these assets will be protected with an easement or other mechanism. The Province will not pay for any costs associated with land protection, such as a conservation easements; and
- professional fees to confirm that works have been inspected and are completed in accordance with the design plans prepared under the Service Contract within 30 days after the completion of the construction phase, including provision of a letter signed by an Authenticating Professional, and supporting documentation such as videos, photos, measurements and submission of as-built plans, if applicable.

All field fit changes to the Wetland Replacement Project construction phase and associated costs must be communicated to the Province within 24 hours. Corrective actions and associated costs must be proposed by the Project Proponent in advance and approved by the Province in writing.

5.4 Phase 4: Monitoring and Maintenance

Monitoring and Maintenance Phase costs include all the tasks, services and deliverables associated with monitoring the wetland replacement project to ensure the replacement wetland is meeting the goals and objectives of the approved project design and completing an annual monitoring report.

The Monitoring and Maintenance Phase begins when the construction phase ends. Monitoring and maintenance shall be completed annually and in accordance with the Monitoring and Maintenance Plan after the construction phase is completed, for four consecutive years following completion of construction.

Monitoring and maintenance costs include reasonable costs associated with completing:

- annual inspections and maintenance on the wetland structures;
- annual wetland monitoring program including:

- hydrology monitoring;
- vegetation monitoring; and
- general monitoring; and
- undertaking post-construction maintenance undertaken to address issues with wetland structures, wetland establishment or function as designed, including, but not limited to:
 - weed management;
 - additional vegetation planting;
 - soil amendments; and
 - recontouring basin topography as required.
- all observed and measured issues and impairments with a replacement wetland must be communicated to the Province within 20 working days. Corrective actions and associated costs must be proposed by the Project Proponent in advance and approved by the Province in writing.

6. Value Added Considerations

The Proposal must identify any additional considerations that add value to the Wetland Replacement Project. This may include the following examples:

- Wetland Replacement Projects that include additional funding, in-kind resources or additional cost savings (e.g., land donations). If the added value is not a direct cash payment, determine the approximate cash value of all contributions. For example, provide the approximate value of the donated land or materials, or operator costs if time or equipment is being donated;
- protection mechanisms such as being located on municipal land, conservation easements (either pre-existing or to be added by the Project Proponent) that add value to the long-term protection of the Wetland Replacement Project;
- the Wetland Replacement Project is being conducted in coordination, or in considering future educational opportunities. For example, being located close to a school, or vegetation planting being completed by students, or easily publicly accessible for educational signs that will be installed by the Project Proponent.

7. Project Team

Wetland Replacement Projects are to be completed by a multi-disciplinary team of professionals, as set out below.

The key project team members must be identified in the Proposal and include at least one Authenticating Professional. Submit a summary of the individuals on the project team, including their qualifications and relevant experience. Team members with relevant and demonstrable experience in completing Wetland Replacement Projects are preferred.

In addition to Authenticating Professionals, Wetland Replacement Project teams may include:

- project manager;
- regulatory authorizations and permits expert;
- professional engineer;
- hydrologist and/or hydrogeologist;
- wetland restoration ecologist; and
- staff of the Project Proponent.

8. Sub-Contractors

Indicate in the Proposal what services, if any, will be provided through the use of sub-contractors. If known at the time of Proposal submission, include in the Proposal a list of any selected sub-contractors, or a short list of anticipated sub-contractors, and a brief description of their qualifications and relevant experience.

9. Freedom of Information and Protection of Privacy Act (Alberta) (“FOIP”)

The purpose of collecting Personal Information (as that term is defined in FOIP) for these Proposal Submission Requirements is to enable the Province to ensure the accuracy and reliability of the information, to assess the Proposal, and for other related program purposes of the Province. Authority for this collection is the *Government Organization Act* (Alberta), as amended from time to time and section 33 (c) of FOIP. The Project Proponent may contact the Province’s contact person identified in the MOU regarding any questions about collection of Personal Information pursuant to these Proposal Submission Requirements.

By submitting a Proposal the Project Proponent acknowledges that:

- (a) FOIP applies to all information and records relating to, or obtained, generated, created, collected or provided under, these Proposal Submission Requirements or which are in the custody or

under the control of the Province. FOIP allows any person a right of access to records in the Province's custody or control, subject to limited and specific exceptions as set out in FOIP; and

- (b) If it considers portions of its Proposal to be confidential, the Project Proponent should identify those parts of its Proposal to the Province considered to be confidential and what harm could reasonably be expected from disclosure. The Province does not warrant that this identification will preclude disclosure under FOIP.

The Project Proponent consents, and obtained the written consent from any individuals identified in the Proposal as applicable, to the use of Personal Information in the Proposal by the Province to enable the Province to evaluate the Proposal and for other program purposes of the Province, and will provide those written consents to the Province upon request.

10. Conflict of Interest

Project Proponents must fully disclose to the Province, in writing, the circumstances of any actual, possible or perceived conflict of interest in relation to the Project Proponent, any of its team members, employees, sub-contractors or agents, if the Proposal were to be approved with the intention that the Project Proponent become the Province's contractor pursuant to a related Service Contract.

The Province may reject any Proposal where, in the opinion of the Province, the Project Proponent, any Project Proponent team member, employee, sub-contractor or agent is, could be, or could be perceived to be in a conflict of interest if the Project Proponent were to become a contractor in respect of the proposed Wetland Replacement Project.

11. Submission of Proposals

Completed Proposals must be sent to aep.wetlandreplacement@gov.ab.ca for review and evaluation. The Province may request more information or clarification before approving or refusing the Proposal.

Appendix 1 to Proposal Submission Requirements

Pricing Form

Project Proponents must complete and include the below form in the Proposal.

- Insert the prices (inclusive of all expenses) for each of the services, deliverables and other costs as indicated for each phase; the total price for all phases; and the price per hectare breakdown.
- Insert the anticipated start and completion dates for each phase of the Wetland Replacement Project.

The Project Proponent may remove or add additional key services or deliverables under each phase as necessary depending on the specifics of the Wetland Replacement Project.

Project Name:	Total Number of ha restored

5.1. PHASE 1: WETLAND REPLACEMENT PROJECT SELECTION		
Dates for Completion of Phase:	_____, 20__ to _____, 20__	
Services, Deliverables and Costs	Total Price	
5.1.1 Site Selection Costs 5.1.1.1: <i>Staff time and consulting fees associated with initial targeting of potential Wetland replacement Projects, such as:</i> <i>(i) Pre-proposal requirements (meetings, joint site visits)</i> <i>(ii) Office level mapping and identification of drained wetlands;</i> <i>(iii) Landowner engagement;</i> <i>(iv) Marketing and communication</i>	\$	
	<i>Rate/Hour or Flat fee (Consultant)</i>	<i>Hours (if applicable)</i>
<i>a. Staff Position</i>		
<i>b. Staff Position</i>		
<i>c. Staff Position</i>		
<i>d. Consulting Fees</i>		
<i>e. Consulting Fees</i>		

Services, Deliverables and Costs	Total Price																					
<p>5.1.1 Site Selection Costs (cont'd)</p> <p>5.1.1.2. <i>Costs for materials and equipment associated with office level targeting and initial landowner engagement (specify materials and equipment, e.g., trucks, atv's, survey equipment, etc.)</i></p> <p style="padding-left: 40px;"><i>Total Materials costs:</i> \$ _____</p> <p style="padding-left: 40px;"><i>Equipment costs:</i></p> <table border="1" style="margin-left: 80px;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Rate/Day</th> <th style="width: 20%; text-align: center;">Total Days</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">i. <i>ATV</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">ii. <i>Trucks</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">iii. <i>Survey Equipment</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">iv. <i>Other</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">v. <i>Other</i></td> <td></td> <td></td> </tr> </tbody> </table>		Rate/Day	Total Days	i. <i>ATV</i>			ii. <i>Trucks</i>			iii. <i>Survey Equipment</i>			iv. <i>Other</i>			v. <i>Other</i>			\$			
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v. <i>Other</i>																						
<p>5.1.1.3 <i>Staff costs and consultant fees associated with site selection and securement of Wetland Replacement Project, such as:</i></p> <p style="padding-left: 40px;"><i>(i) landowner engagement and agreements negotiated by the Project Proponent with the relevant landowners;</i></p> <p style="padding-left: 40px;"><i>(ii) communication and negotiation processes with relevant landowners and third parties; and</i></p> <p style="padding-left: 40px;"><i>(iii) preparation and writing of the Proposal.</i></p> <table border="1" style="margin-left: 80px;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Rate/Hour or Flat fee (Consultant)</th> <th style="width: 20%; text-align: center;">Hours (if applicable)</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">a. <i>Staff</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">b. <i>Staff</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">c. <i>Staff</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">d. <i>Staff</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">e. <i>Consulting Fees</i></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">f. <i>Consulting Fees</i></td> <td></td> <td></td> </tr> </tbody> </table>		Rate/Hour or Flat fee (Consultant)	Hours (if applicable)	a. <i>Staff</i>			b. <i>Staff</i>			c. <i>Staff</i>			d. <i>Staff</i>			e. <i>Consulting Fees</i>			f. <i>Consulting Fees</i>			\$
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<p>5.1.2 Costs for Projects that Did Not Proceed</p> <p><i>Reasonable costs previously incurred by the Project Proponent for potential Wetland Replacement Projects that did not proceed (for reasons such as landowner withdrawal, third party permissions not attained, contaminated site issues, non-compliance issues, or not approved by the Province). Refer to requirements as per section 5.1.2 of Proposal Submission Requirements.</i></p>	\$																					
PHASE 1 TOTAL PRICE	\$																					

5.2. PHASE 2: DESIGN AND REGULATORY AUTHORIZATION PHASE		
Dates for Completion of Phase:		_____, 20__ to _____, 20__
Services, Deliverables and Costs		Total Price
<i>Development of detailed construction of restoration design plans and drawings for Wetland Replacement Project, including professional fees and other costs for the following</i>		
<i>(a) site evaluation of existing conditions, including field assessments and elevation surveys of the adjacent land and existing and proposed wetland location with a survey-grade laser level, at a minimum;</i>		\$
<i>(b) plan and cross-sectional view drawings of Wetland Replacement Project with georeferenced locations of ditch plugs, weirs, vertical grade control structures, spillways, and other significant features;</i>		\$
<i>(c) engineering drawings of structures, if required</i>		\$
<i>Obtaining applicable regulatory authorizations, including but not limited to providing Code of Practice notification, and obtaining regulatory authorisations under the Water Act or Public Lands Act</i>		\$
<ul style="list-style-type: none"> <i>specify each service, deliverable or cost and its price</i> 		
<i>Cost of Registering landowner agreement against Title.</i>		\$
PHASE 2 TOTAL PRICE		\$

5.3. PHASE 3: CONSTRUCTION PHASE		
Dates for Completion of Phase:		_____, 20__ to _____, 20__
Services, Deliverables and Costs		Total Price
<i>Costs for equipment required (e.g., backhoe, excavator, dozer, skid steer, specify equipment)</i>		\$
	<i>Rate/Hour</i>	<i>Hours</i>
<i>i. Excavator</i>		
<i>ii. Truck</i>		
<i>iii. Bulldozer</i>		
<i>iv. Other</i>		

<i>Equipment mobilization costs</i>			\$
<i>Costs to purchase plant materials, including plugs and seed, as well as other materials (specify materials, e.g., woody debris, rock, liners)</i>			\$
	<i>Cost</i>		
<i>Wetland Plugs</i>			
<i>Native Seed</i>			
<i>Willow Staking</i>			
<i>Wheat and Straw Bales</i>			
<i>Stone</i>			
<i>Other</i>			
<i>Costs for seeding, planting, amending soils, placing woody debris or other activity.</i>			\$
<i>Weed removal and management costs.</i>			\$
<i>Equipment operator costs for installing replacement works, vertical grade control structures, rock spillways, berms, or any other structure, or for constructing a wetland via excavation and recontouring.</i>			\$
	<i>Rate/Hour</i>	<i>Hours</i>	
<i>i. Staff</i>			
<i>ii. Staff</i>			
<i>iii. Staff</i>			
<i>iv. Staff</i>			
<i>Costs, for erosion and sediment control structures</i>			\$
<i>Construction Supervision .</i>			\$
	<i>Rate/Hour</i>	<i>Hours</i>	
<i>i. staff</i>			
<i>ii. staff</i>			
<i>iii. staff</i>			
<i>iv. staff</i>			
<i>All costs related to payments to landowners to secure lands, if required for the purposes of the Wetland Replacement Project</i>			\$
<i>Costs for activities or infrastructure located outside of the wetland replacement area but that will directly increase overall functions of the Wetland Replacement Project (specify activities and infrastructure.)</i>			\$
<i>Professional fees to confirm that works have been inspected and are completed in accordance with the design plans prepared under the Service Contract, including provisions of a letter signed by Authenticating Professional, and supporting documentation such as videos, photos, measurement and submission of as-built plans if applicable.</i>			\$
PHASE 3 TOTAL PRICE			\$

5.4. PHASE 4: MONITORING AND MAINTENANCE PHASE

Dates for Completion of Phase: _____, 20__ to _____, 20__

Services, Deliverables and Costs	Total Price
<p><i>Completion of the following requirements during each year of the four year Monitoring and Maintenance Phase, in accordance with the requirements set out in section 3 of the Proposal Submission Requirements:</i></p>	
<p>(a) Completion of -Annual Inspection; and -Maintenance of Structures (to be completed as required) as set out in section 3.1 of the Proposal Submission Requirements.</p> <p>\$ _____ For year 1</p> <p>\$ _____ For year 2</p> <p>\$ _____ For year 3</p> <p>\$ _____ For year 4</p>	<p>\$</p>
<p>(b) Completion of Annual Monitoring Requirements and Performance Standards as set out in section 3.2 of the Proposal Submission Requirements.</p> <p>\$ _____ For year 1</p> <p>\$ _____ For year 2</p> <p>\$ _____ For year 3</p> <p>\$ _____ For year 4</p>	<p>\$</p>
<p>(c) Completion of Post-Construction Maintenance as set out in section 3.3 of the Proposal Submission Requirements.</p> <ul style="list-style-type: none"> • To be completed as necessary • Amount shown should be total estimated budget for this category for the entirety of the Monitoring and Maintenance Phase and does not need to be used evenly for each year of the Monitoring and Maintenance Phase • Project Proponent will only invoice the Province for its actual costs incurred, up to the total price stated, and will reduce its costs where possible by identifying opportunities for efficiencies. <p>\$ _____ For year 1</p> <p>\$ _____ For year 2</p> <p>\$ _____ For year 3</p> <p>\$ _____ For year 4</p>	<p>\$</p>

<p>(d) <i>Preparation and submission of Annual Monitoring Report as set out in section 3.4 of the Proposal Submission Requirements.</i></p> <p>\$_____ For year 1</p> <p>\$_____ For year 2</p> <p>\$_____ For year 3</p> <p>\$_____ For year 4</p>	\$
<p>(e) <i>Preparation and submission of a Final Verification Letter (to be submitted only with final Annual Monitoring Report provided in year 4 of of the monitoring and maintenance phase)</i></p>	\$
PHASE 4 TOTAL PRICE	\$
TOTAL PROJECT PRICE	
Total Price for all Phases	\$
Dollars per hectare breakdown	\$ / hectare