



Alberta Wetland Mitigation Directive

December 1, 2018



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Purpose

The Alberta Wetland Policy provides a “strategic framework for conserving, restoring and protecting Alberta’s wetlands (Alberta Wetland Policy, 2013).” The purpose of this Directive is to inform planning and decision-making to avoid and minimize negative impacts to wetlands and, where necessary, replace lost wetland area and value.

Reference Documents:

- Alberta Wetland Policy
- Alberta Wetland Regulatory Requirements Guide
- Alberta Wetland Assessment and Impact Report Directive
- Alberta Wetland Identification and Delineation Directive
- Alberta Wetland Restoration Directive
- Directive for Permittee-Responsible Wetland Construction in Alberta
- Alberta Guide to Wetland Construction in Stormwater Management Facilities

Citation

Government of Alberta. 2018. Alberta Wetland Mitigation Directive. Water Policy Branch, Alberta Environment and Parks. Edmonton, Alberta.

1. Policy Scope

The Alberta Wetland Policy (The Policy) informs the management of wetlands throughout the Province, excluding those on federal lands. The Policy became effective province-wide on July 4, 2016.

Water Act applications made under Wetland Management in the Settled Areas of Alberta – an Interim Policy (1993) and the Provincial Wetland Restoration/Compensation Guide (2007) are no longer accepted.

Energy resource activities regulated by the Alberta Energy Regulator (AER), as well as surface material activities regulated by Alberta Environment and Parks (AEP), are subject to The Policy unless the impacts to wetlands occur inside of:

- An approved project boundary in place prior to July 4, 2016, including a Water Act approval boundary, Public Lands Act disposition boundary, or Environmental Protection and Enhancement Act approval boundary; or
- The local study area of an environmental impact assessment (EIA) or pre-disturbance assessment where
 - the field-based assessment was completed prior to July 4, 2016 in accordance with environmental regulatory requirements at that time; and
 - which is deemed complete by the regulatory body

Any questions about Wetland Policy applicability should be sent to:

- aep.wetlands@gov.ab.ca

2. Wetland Mitigation Hierarchy

The wetland mitigation hierarchy (Figure 1) establishes the following management approach to wetland impacts in Alberta:

1. Avoidance – The primary and preferred response is to avoid wetland impacts
2. Minimization – Where avoidance is not possible, applicants are expected to minimize wetland impacts
3. Replacement – As a last resort, and where avoidance and minimization efforts are not feasible or prove ineffective, wetland replacement is required

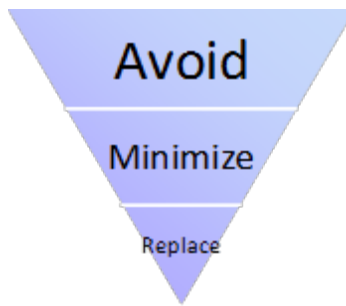


Figure 1. Wetland Mitigation Hierarchy

3. Avoidance

Avoidance is the highest priority for wetland mitigation. Regulatory applicants must demonstrate they have made a concerted effort to avoid wetland impacts. Avoidance may be required by the regulatory body in consideration of, but not limited to, any of the following:

- Land management under the *Public Lands Act*, *Forests Act* or *Transportation Act*, including where the Crown asserts ownership of the bed and shore of permanent and naturally occurring bodies of water under the *Public Lands Act*
- Lands designated under the *Provincial Parks Act*, *Wilderness Areas*, *Ecological Reserves*, *Natural Areas and Heritage Rangelands Act* and the *Willmore Wilderness Park Act*
- Wetland-dependent species that are listed as endangered or threatened species under the *Wildlife Act*, *Wildlife Regulation* (Schedule 6), or the *Species at Risk Act* (Canada)
- Wetland management objectives established under the *Alberta Land Stewardship Act's* Regional Plans
- Wetland management objectives within any other statutory plan or legislation
- Municipal plans and bylaws under the *Municipal Government Act*
- Effects on the aquatic environment under the *Water Act*, Section 38

The onus is on the applicant to demonstrate a) avoidance of wetlands, and b) preservation of relative wetland value. Evidence of avoidance can include:

- Options considered for relocating the activity
- Alternative activities considered at the proposed location
- Modifications considered to the proposed activity
- A comparative analysis of options

Wetlands in the A-value category are the least common and highest value in the province; they therefore require the greatest effort of avoidance. Applicants must provide a comparative analysis of options to avoid and minimize impacts to A-value wetlands, including at least one option that will avoid the A-value wetland(s) entirely.

4. Minimization

Minimization refers to “reducing negative impacts on wetlands to the smallest practicable degree during the planning, design, construction, and operational stages of development, and when conducting “activities that may harm wetlands” (Alberta Wetland Policy, 2013). For the purposes of this document, minimization also encompasses wetland reclamation. An applicant must consider minimization of both direct and indirect impacts on the physical area of the wetland and the relative wetland value.

Applicants may be required to minimize impacts on wetlands in consideration of any of the following:

- Land management under the *Public Lands Act*, *Forests Act* or *Transportation Act*, including where the Crown asserts ownership of the bed and shore of permanent and naturally occurring bodies of water under the *Public Lands Act*
- Lands designated under the *Provincial Parks Act*, *Wilderness Areas*, *Ecological Reserves*, *Natural Areas and Heritage Rangelands Act* and the *Willmore Wilderness Park Act*
- Wetland-dependent species that are listed as endangered or threatened species under the *Wildlife Act*, *Wildlife Regulation* (Schedule 6), or the *Species at Risk Act* (Canada)
- Wetland management objectives established under the *Alberta Land Stewardship Act’s* Regional Plans.
- Wetland management objectives within any other statutory plan or legislation
- Municipal plans and bylaws under the *Municipal Government Act*
- Effects on the aquatic environment under the *Water Act*, Section 38

The onus is on the applicant to demonstrate a) that minimization of wetland impacts, including indirect impacts, has been achieved and b) preservation of relative wetland value. Evidence of minimization can include:

- Alternative activities considered in the proposed area
- Modifications considered to the proposed activity
- A comparative analysis of options
- Explicit commitment to reclaim the area to wetland

Minimization Proposal

Applicants must submit a wetland minimization proposal as part of their application. The minimization proposal must include:

- Documentation of all options considered to minimize impacts on wetlands, including modifications to the activity, design, or location
- Commitment to apply best science, technology and ecological principles
- Minimization techniques proposed to maintain natural conditions and functions of existing wetlands
- Commitment to follow any available best management practices or standard operating procedures

- Timing of construction and maintenance activities to prevent or minimize impacts to wetland-dependent species or the aquatic environment

Reclamation Proposal

Applicants proposing wetland impacts can meet The Policy's requirements if the disturbed land is reclaimed to a wetland using appropriate reclamation techniques. Applicants proposing to mitigate wetland impacts through wetland reclamation must do so by providing a wetland reclamation proposal in the Wetland Assessment and Impact Report or Form, and by referencing any relevant reclamation plan that aligns with the wetland reclamation proposal.

The wetland reclamation proposal must include the following components:

- 1) An explicit commitment to the total wetland area that will be reclaimed
- 2) A comparison of pre-disturbance to post-reclamation characteristics, including wetland area, class, vegetation, soils, hydrology and habitat
- 3) Specific, measurable, attainable, realistic and time-bound wetland reclamation objectives and outcomes
- 4) Evaluation of the projected impacts on wetland area and relative wetland value, and the technical feasibility of wetland reclamation
- 5) Commitment to apply appropriate and best available reclamation techniques

Where lands and activities are under the authority of the *Public Lands Act* and/or the *Environmental Protection and Enhancement Act*, and where a wetland is proposed as the end land use, the wetland reclamation proposal must meet the intent of equivalent land capability as directed and approved by the regulatory body. Note that any deficit between the pre-disturbance wetland area and the final reclaimed wetland area is subject to wetland replacement requirements (See Replacement Section).

5. Replacement

Wetland replacement is required when wetland impacts will result in permanent loss of wetland area. Permanent loss is defined as "the permanent elimination of wetland value resulting from a reduction/removal of wetland area" (Alberta Wetland Policy, 2013).

Applicants can fulfill their replacement obligations through any combination of the following options:

1. Undertake a wetland replacement project to restore a previously drained wetland or construct a new wetland. This option is called **permittee-responsible replacement**
2. Pay a **wetland replacement fee**

The blue column in the wetland replacement matrix (Figure 2) are the replacement ratios used to calculate the wetland replacement fees. For example, the permanent loss of an A-value wetland costs 8 times as much to replace than the permanent loss of a D-value wetland. Replacement rates differ regionally according to Table 2 in Schedule 1.

		The Wetland Replacement Matrix			
		Value of Replacement Wetland			
		D	C	B	A
Value of Lost Wetland	A	8:1	4:1	2:1	1:1
	B	4:1	2:1	1:1	0.5:1
	C	2:1	1:1	0.5:1	0.25:1
	D	1:1	0.5:1	0.25:1	0.125:1

*Ratios are expressed as area of wetland

Figure 2. Wetland Replacement Matrix

To the extent possible, wetland replacement will be prioritized in the following order, relative to where the wetland loss occurred:

1. Within the same municipality
2. Within the same watershed¹, or, upstream of the municipal boundary, where the municipality will derive ecosystem services
3. Within the same Relative Wetland Value Assessment Unit (RWVAU, Figure 3)
4. Within the same natural region²
5. In areas of Alberta that have experienced high historical wetland loss³

¹ Watershed boundaries (Hydrologic Unit Code 4) are available through GeoDiscover dataset "Hydrologic Unit Code Watersheds of Alberta" or "Watersheds of Alberta (GOA)"

² Natural regions are available through GeoDiscover Alberta "2005 Natural Regions and Subregions of Alberta"

³ Areas of high historical wetland loss include Relative Wetland Value Assessment Units (RWVAUs) 13, 14, 15, 20 (White Area), and 21.

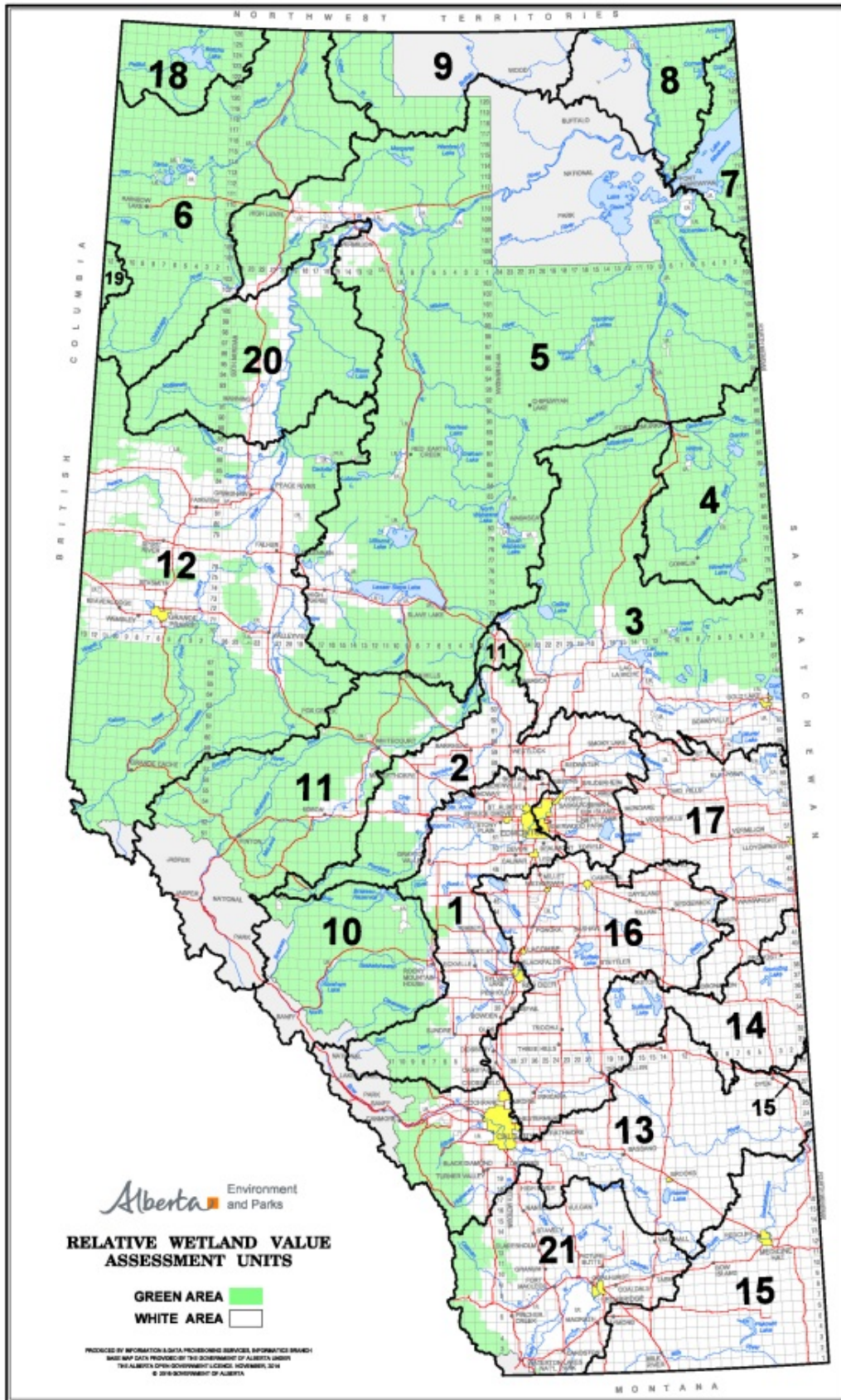


Figure 3. Relative Wetland Value Assessment Units (RWVAU)

Schedule 1: Wetland Replacement Fee Rates

Rates in Table 1 are based on the following information:

- Average land values within each RWVAU (except for Public Lands in the Green Area)
- The cost per hectare for materials and labor to restore a previously existing wetland that has been drained
- The cost of monitoring a restored wetland
- An administrative fee

Table 1. Wetland replacement fee rates per hectare

	Relative Wetland Value Assessment Unit	Rate (\$/ha)
Public Land ⁴ (in the Green Area)	Units 1-13 and 18-21	10,300
Public Land (in the White Area including Crown owned bodies of water)	1	19,100
	2	19,400
	3	19,100
	4	19,100
	5	18,400
	6	18,200
	7	18,400
	8	18,400
	9	18,400
	10	19,100
	11	19,400
Private Land ⁵ (province-wide)	12	18,500
	13	17,700
	14	18,200
	15	17,300
	16	18,500
	17	18,600
	18	18,200
	19	18,200
	20	18,200
	21	17,700

⁴ Public Lands are provincially owned lands administered and regulated by any ministry of the GoA or the Alberta Energy Regulator.

⁵ Private Land includes all freehold land, but excludes provincially owned lands administered and regulated by a ministry of the GoA or the AER, and land owned and administered by the Federal Government and First Nations.

Contact Information

Any comments, questions, or suggestions regarding the content of this document may be directed to:

Water Policy Branch
Alberta Environment and Parks
7th Floor, Oxbridge Place
9820 – 106 Street
Edmonton, Alberta T5K 2J6
Phone: 780 644-4959
Email: AEP.Wetlands@gov.ab.ca

Additional copies of this document may be obtained by contacting:

Alberta Environment and Parks
Information Centre
Main Floor, Great West Life Building
9920 – 108 Street
Edmonton, Alberta T5K 2M4
Call Toll Free Alberta: 310-ESRD (3773)
Toll Free: 1 877 944-0313
Fax: 780 427-4407
Email: AEP.Info-Centre@gov.ab.ca
Website: AEP.alberta.ca

Authorities

Original signed by: _____

Andy Ridge, Executive Director
Water Policy Branch
Alberta Environment and Parks

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