



Alberta Wetland Mitigation Directive

June 2015

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Purpose

The requirements in this Directive are mandatory for all persons conducting activities that impact or may impact wetlands.

Policy Context

This Directive supports the Alberta Wetland Policy.

Reference Documents:

- *Water Act*
- *Water (Ministerial) Regulation*
- *Water (Offences and Penalties) Regulation*
- *Public Lands Act*
- *Public Lands Administration Regulation*
- *Environmental Protection and Enhancement Act*
- Alberta Wetland Policy
- Alberta Wetland Regulatory Requirements Guide
- Alberta Wetland Assessment and Impact Report Directive
- Alberta Wetland Classification System
- Alberta Wetland Identification and Delineation Directive
- Alberta Wetland Relative Evaluation Tool – Actual (ABWRET-A) Manual

Enforcement/Compliance

Proponents must use this Directive to mitigate impacts to wetlands from any activities they are proposing. The failure to demonstrate the requirements of this Directive have been met may result in the failure to obtain the required authorization under the *Water Act*, *Public Lands Act*, or *Environmental Protection and Enhancement Act*.

Citation

Government of Alberta. 2015. Alberta Wetland Mitigation Directive. Water Policy Branch, Alberta Environment and Parks. Edmonton, Alberta.

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1. Background

The goal of the Alberta Wetland Policy 2013 (the Policy) is to conserve, restore, protect and manage Alberta's wetlands to sustain the benefits they provide to the environment, society and economy. To achieve this goal, the Policy focuses on the following outcomes:

- Wetlands of the highest value are protected for the long-term benefit of all Albertans
- Wetlands and their benefits are conserved and restored in areas where losses have been high
- Wetlands are managed by avoiding and minimizing adverse effects, and, where necessary, replacing permanent loss of wetland area
- Wetland management considers regional context

2. Policy Scope

Following a period of phased implementation, the Alberta Wetland Policy will apply to all wetlands in the Province. The Policy comes into effect in the White Area as of June 1, 2015 and replaces Wetland Management in the Settled Area of Alberta: An Interim Policy (1993). The Policy will be implemented in the Province's Green Area as of June 1, 2016. This Directive, as well as other wetland policy tools, may be subject to revision as implementation in the Green Area is completed. As part of the implementation process, the following clarifications are provided:

- Previously approved projects, and project applications submitted¹ and under review prior to June 1, 2015 in the White Area and June 1, 2016 in the Green Area, are not subject to wetland replacement requirements under the Alberta Wetland Policy
- Activities associated with a reclamation requirement or a reclamation plan, pursuant to the *Environmental Protection and Enhancement Act*, are not subject to wetland replacement requirements for the portion of lost wetland explicitly identified for future reclamation
- Any loss of wetland area not associated with an explicit intent to reclaim back to wetland is deemed permanent and, therefore, subject to wetland replacement requirements
- Project renewals, amendments, or expansions; in cases where significant changes to an approved project plan result in the permanent loss of a) marsh or open water wetlands within an existing project boundary, or b) wetlands of any class outside of a previously defined project boundary (i.e., within an expanded boundary); will require wetland replacement

3. Purpose

The Wetland Mitigation Directive provides direction and criteria for proponents to implement the mitigation hierarchy described in the Policy. Proponents must use the Wetland Mitigation Hierarchy during the planning, wetland assessment, and application stages of a proposed activity.

¹ With some administrative exceptions

4. Wetland Mitigation Hierarchy

The Wetland Mitigation Hierarchy (Figure 1) refers to a three stage approach, in descending order of priority:

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

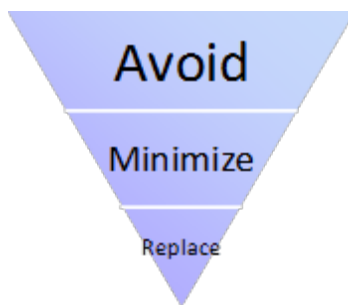


Figure 1. Wetland Mitigation Hierarchy

5. Avoidance

Avoidance is the highest priority for wetland mitigation. Proponents may be required to avoid wetlands and adverse effects on wetlands in consideration of, but not limited to, any of the following:

- Effects on the aquatic environment under the *Water Act*, Section 38
- Where the Crown claims ownership of wetlands 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 species under the *Wildlife Act*, *Wildlife Regulation* (Schedule 6), or the *Species at Risk Act* (Canada)
- Wetland management objectives within the Alberta Land Stewardship Act Regional Plans, or nested Sub-Regional Plans
- Wetland management objectives within any other statutory plan or legislation
- Municipal plans and bylaws under the *Municipal Government Act*

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

- Options considered for relocating the activity
- Alternative activities considered in the proposed area
- Modifications considered to the proposed activity
- Comparative analysis of alternative options to the proposed activity

5.1 Wetlands in the A-value Category

A (high)-value wetlands are least common in the province; therefore, they require the greatest effort of avoidance. Proponents must provide a comparative analysis of each alternative option to the proposed activity, including at least one option that will avoid the A-value wetland(s) entirely. The comparative analysis must provide rationale regarding their choice for each of the options considered.

6. Minimization

Minimization is the second preference in the Wetland Mitigation Hierarchy when a proponent has demonstrated that avoidance is not possible. Minimization refers to both direct and indirect effects on the physical area of the wetland, the relative value of the wetland, or a combination of both.

Proponents may be required to minimize adverse effects on wetlands in consideration of any of the following:

- Effects on the aquatic environment under the *Water Act*, Section 38
- Where the Crown claims ownership of wetlands under the *Public Lands Act*, including areas surrounding such wetlands
- 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 species under the *Wildlife Act*, *Wildlife Regulation* (Schedule 6), or the *Species at Risk Act* (Canada) and Alberta Species of Special Concern
- Wetland management objectives within the *Alberta Land Stewardship Act* Regional Plans, or nested Sub-Regional Plans
- Wetland management objectives within any other statutory plan or legislation

The onus is on the Proponent to demonstrate a) that minimization of adverse effects on wetlands (where different from avoidance), including indirect impacts, has been achieved and b) preservation of relative wetland value. Evidence of minimization must include:

- Alternative activities considered in the proposed area
- Modifications considered to the proposed activity
- Comparative analysis of alternative options to the proposed activity

6.1 Wetlands in the A-value Category

A(high)-value wetlands are least common in the province; therefore, when avoidance is not possible, they also require the greatest effort of minimization. Proponents must provide a comparative analysis of each alternative option to the proposed activity, identifying how, to the greatest extent possible, the options minimize permanent loss of and temporary impact to A-value wetland(s). Proponents must provide rationale regarding their choice for each of the options considered.

6.2 Minimization Proposal

Proponents must submit a Wetland Minimization Proposal as part of their application. The minimization proposal must include:

- Documentation of all options considered to minimize adverse effects on wetlands, including modifications to the activity, design, or location
- Use of best available science and technology
- Application of sound ecological principles
- Minimization techniques proposed to maintain natural conditions and functions of existing wetlands
- Timing of construction activities to prevent or minimize impacts to wetland- dependent species or the aquatic environment

7. Replacement

If adverse effects to a wetland cannot be avoided or minimized, and those effects will result in permanent loss of wetland area², Proponents must submit a Replacement Proposal for loss of wetland area, as part of their application. Activities associated with a reclamation requirement, pursuant to the *Environmental Protection and Enhancement Act*, are subject to replacement requirements for wetland area that will not be reclaimed to wetland (see to Section 2, Policy Scope, clarifications regarding reclamation).

Proponents must meet wetland replacement requirements set out in the blue column of the Wetland Replacement Matrix (Figure 2). The replacement matrix depicts wetland replacement ratios on the basis of relative wetland value that is lost, versus what is replaced. Only Proponents seeking to fulfill wetland replacement obligations by engaging in their own (permittee-responsible) approved replacement activity may apply ratios depicted in the white columns of the table³.

² If permanent wetland loss involves a Crown water body, the Public Lands Act requires compensation for the acquisition of beds and shores. This compensation requirement is separate from and additional to wetland replacement requirements stated in this section.

³ Replacement project plans to restore or construct A-value wetlands are not accepted at this time

		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

Figure 2. Wetland Replacement Matrix

Proponents must fulfill their replacement obligations through one or more of the following mechanisms. Replacement actions must be conducted in accordance with applicable Offset Protocols⁴ and/or other applicable guidelines.

1. A wetland offset registry⁵. Proponents may purchase credits that are available in an offset registry. Credits consist of wetland restoration, enhancement and construction projects that have been completed in advance of a permanent wetland loss.
2. In-lieu fee. Proponents may pay an in lieu fee. At this time, Proponents must pay in-lieu fees directly to the designated wetland Replacement Agents provided in Schedule 1, who will undertake wetland restoration on behalf of the Department⁶.

The *in-lieu* fee is determined by multiplying the replacement ratio area of wetland, identified in the blue column in the Wetland Replacement Matrix (Figure 2), with in-lieu rates. In-lieu rates, which differ by Relative Wetland Value Assessment Unit according to Schedule 2, are based on the following:

- Average land values within each RWVAU, per hectare
 - The cost of restoring a previously existing wetland that has been drained, per hectare
 - The cost of monitoring restored wetland success, per hectare
 - An administrative fee
3. Permittee-responsible replacement. Proponents may propose to undertake their own wetland restoration, enhancement or construction project.

⁴ Offset Protocols are under development and not currently available. Restoration protocols will be available soon; others will be made available in the future, as part of ongoing policy implementation.

⁵ The Wetland Offset Program is under development and not currently available. A description of this program (overview) is available.

⁶ This interim process will continue until such time as the Department has set up a dedicated fund to collect wetland replacement *in-lieu* fees.

Non-restorative wetland replacement options support the advancement of wetland science and management, wetland replacement research, wetland education and outreach, wetland stewardship, and wetland securement for the purposes of long-term conservation. The Department will allocate a portion of in-lieu fee payments to fund these options. Proponents cannot contribute directly to non-restorative replacement actions. The Department will administer all non-restorative replacement priorities and actions.

To the extent possible, Proponents must ensure wetland replacement occurs within the same Relative Wetland Value Assessment Unit (RWVAU) as the site of permanent wetland loss; preference will be given to the same municipal boundary⁷. RWVAUs are shown in Figure 3 and accessible through [GeoDiscover Alberta](#).

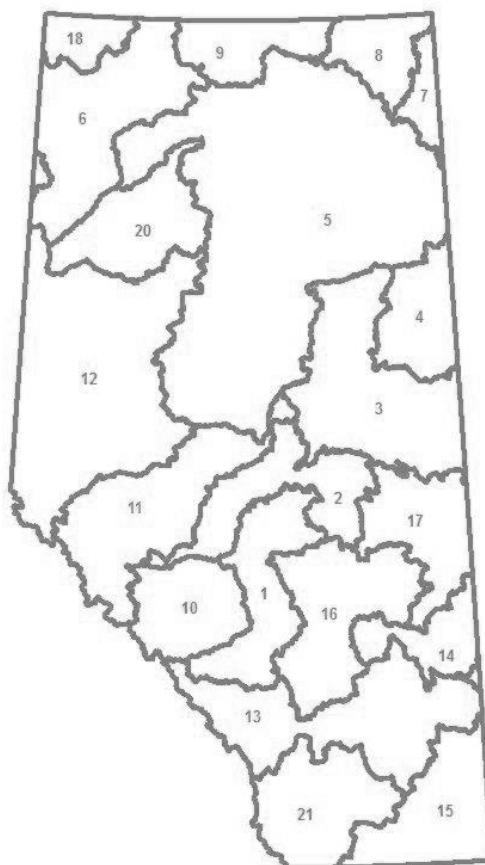


Figure 3. Relative Wetland Value Assessment Units (RWVAU)

⁷ Replacement stormwater management wetlands are subject to further replacement area restrictions (Schedule 3)

7.1 Replacement Proposal

Where permanent wetland loss is unavoidable, Proponents must submit a Replacement Proposal for loss of wetland area, as part of their application. The Proposal must include:

- area of wetland, in hectares, that will be permanently lost due to the activity
- replacement ratio (Figure 2) owed, in terms of D-value units (Blue Column)
- proposed replacement mechanism(s) chosen (Including rationale) to fulfill replacement obligations
- proposed replacement ratios, area and relative value of each replacement wetland (required only if the permittee-responsible replacement mechanism is chosen)
- replacement project plan, if conducting permittee-responsible replacement. However:
 - Replacement project plans to construct stormwater management wetlands are subject to provisions outlined in Schedule 3
 - Replacement project plans to restore or construct A-value wetlands are not accepted at this time

8. Effective Date

This Directive comes into effect on June 1, 2015.

8.1 Directive Review and Amendment

This Directive may be reviewed and amended by the Department as required.

Schedule 1: Designated Wetland Replacement Agents

Table 1. Administrative boundaries of designated Wetland Replacement Agents as of 2015

Wetland Replacement Agent	<i>In-lieu</i> Administrative Boundary
Ducks Unlimited Canada	White Area
County of Vermilion River	Municipal boundary of the County of Vermilion River
City of Calgary	Municipal boundary of the City of Calgary

Schedule 2: Wetland Replacement *In-Lieu* Fee Rates

Table 2. *In-lieu* fee rates per hectare for 2015

Relative Wetland Value Assessment Unit – Natural Region and Basin	Relative Wetland Value Assessment Unit Number	<i>in-lieu</i> Rate (\$/ha)
Dry Mixedwood South Saskatchewan	1	\$19,139
Dry Mixedwood North Saskatchewan	2	\$19,388
Central Mixedwood North Saskatchewan	3	\$19,131
Dry Mixedwood Athabasca	12	\$18,450
Dry Mixedgrass South Saskatchewan	13	\$17,650
Northern Fescue South Saskatchewan	14	\$18,211
Dry Mixedgrass Milk	15	\$17,328
Central Parkland South Saskatchewan	16	\$18,523
Central Parkland North Saskatchewan	17	\$18,619
Dry Mixedwood Peace/Slave	20	\$18,206
Mixedgrass Milk	21	\$17,661

Schedule 3: Stormwater Management Wetlands

Replacement project plans to construct stormwater management wetlands, to meet wetland replacement requirements, may be allowed subject to these provisions:

- Projects must meet Offset Protocols⁸ for construction of stormwater management wetlands and include performance measures and monitoring
- Areas less than 2 metres in depth⁹ and adjacent vegetative ecological boundary areas¹⁰ may be allowed as wetland replacement
- Areas greater than 2 metres in depth¹¹ will not be allowed as wetland replacement
- Replacement stormwater wetland areas must occur in, or adjacent to, the same project area as the site of permanent loss of wetland area
- Replacement area is measured in terms of D-value wetlands. However:
 - Where the relative value of the wetland permanently lost is D, a maximum of 50% of the total required replacement area may be allowed as stormwater management wetlands
 - Where the relative value of the wetland permanently lost is A, B or C, a maximum of 25% of the total required replacement area may be allowed as stormwater management wetlands

⁸ Offset Protocols are under development and currently not available. In the interim, Applicants must meet Constructed Wetland criteria set out in the Department's Stormwater Management Guidelines for the Province of Alberta (1999). Although these criteria are deemed appropriate, stormwater replacement project plans must be reviewed by a Department Wetland Ecologist/Specialist for sufficiency.

⁹ Alberta Wetland Identification and Delineation Directive 5.1.3 Hydrology Wetland Field Indicators

¹⁰ Alberta Wetland Identification and Delineation Directive 5.1.1 Vegetation Wetland Field Indicators

¹¹ Alberta Wetland Identification and Delineation Directive 5.1.3 Hydrology Wetland Field Indicators and 3.7.2 Lake-fringe Wetlands

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