Alberta Wetland Policy: The Link to Lakes

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Alberta Environment and Sustainable Resource Development
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Outline

- **Brief Policy Overview**
  - **Wetland Definition**
  - **Policy Goal & Outcomes**
  - **Relative Wetland Value**
  - **Wetland Mitigation**
- **Policy Implementation**
  - **The Wetland Management System**
    - Planning
    - Wetland Assessment and Impact Report
    - Application Submission
    - Authorization Decision

What is a Wetland?

- **"A wetland is land saturated with water long enough to promote formation of water altered soils, growth of water tolerant vegetation, and various kinds of biological activity that are adapted to the wet environment."**
- **Highly diverse, productive ecosystems that provide a host of ecological services.**
- **Play an important role in sustaining healthy watersheds by:**
  - **protecting water quality**
  - **providing water storage and infiltration**
  - **providing habitat for wildlife, fish and plants, and sustaining biodiversity.**
- **Amongst the most biologically diverse habitats on earth.**
- **To date, Alberta has lost between 60 and 70% of wetlands within the White (settled) Area of the province. Losses are ongoing.**

What is a Wetland?

Bog

Fen

Swamp

Marsh

Shallow Open Water

Alberta Wetland Policy

Policy Goal:

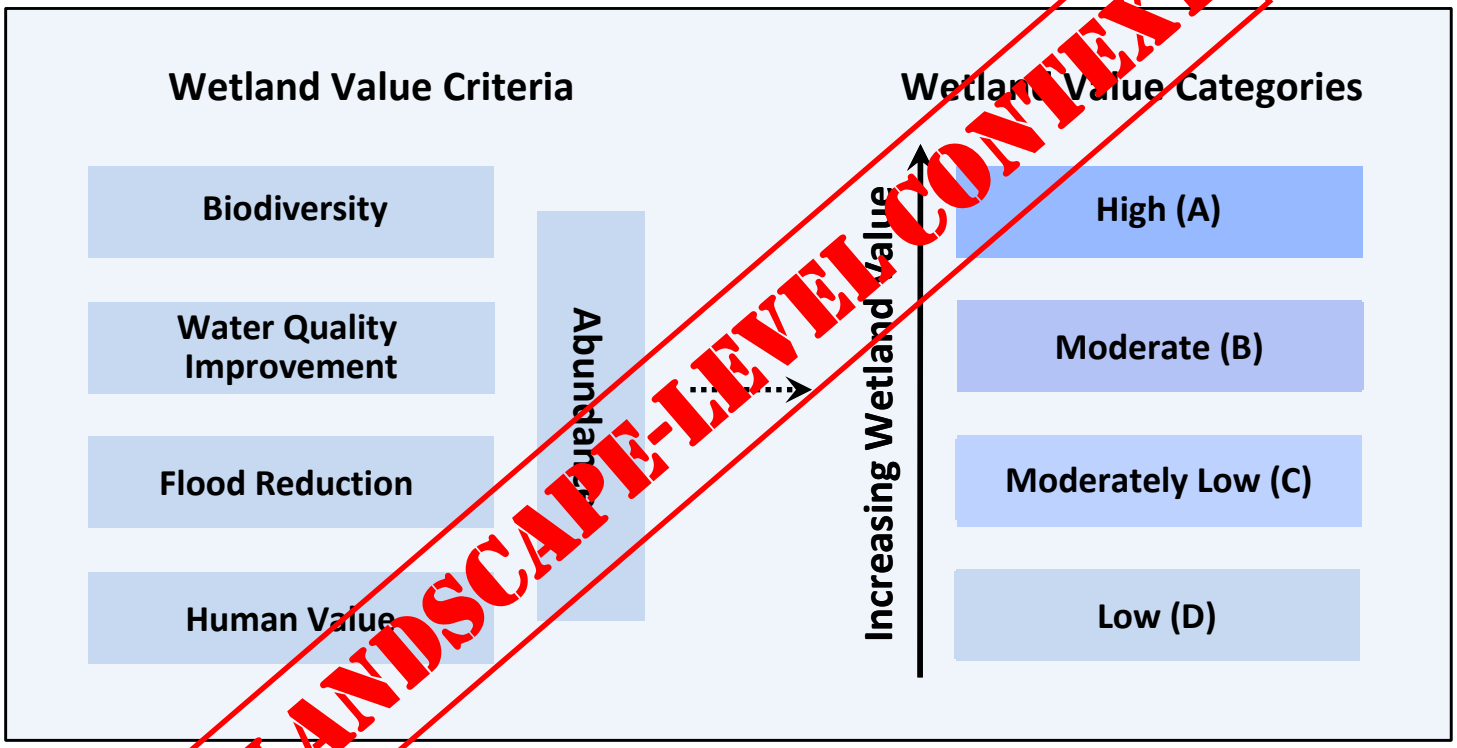
- To conserve, restore, protect, and manage Alberta's wetlands to sustain the benefits they provide to the environment, society, and the economy.

Policy Outcomes:

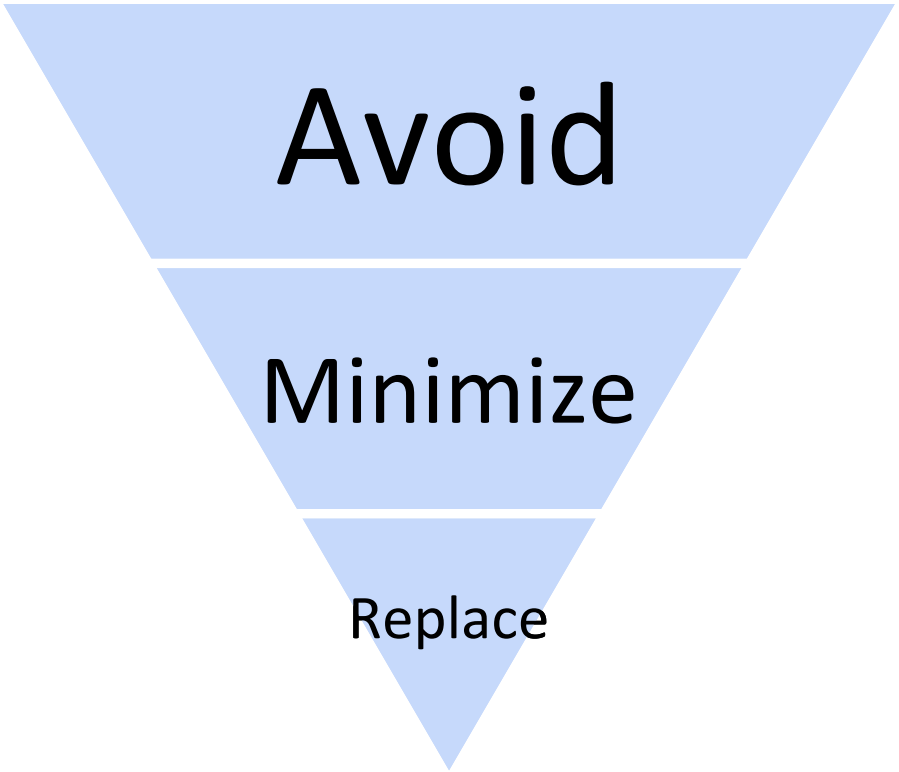
1. Wetlands of the highest value are protected for the long-term benefit of all Albertans.
2. Wetlands and their benefits are conserved and restored in areas where losses have been high.
3. Wetlands are managed by avoiding and minimizing negative impacts, and, where necessary, replacing lost wetland value.
4. Wetland management considers regional context.

Relative Wetland Value

Wetlands are highly diverse in form, function, use, and distribution across the province – they are not all of equal value.



Mitigation System



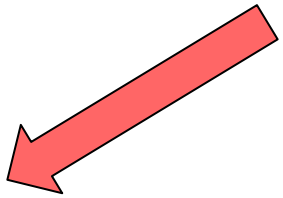
Avoidance – The preferred response is to avoid impacts on wetlands.

Minimization – Where avoidance is not possible, proponents will be expected to minimize impacts on wetlands.

Replacement – As a last resort, and where avoidance and minimization efforts are not feasible or prove ineffective, wetland replacement will be required.

Wetland Replacement

- **Replacement will consider both restorative and non-restorative options, based on defined criteria.**
  - **Restorative: Restore, Enhance, Construct**
  - **Non-Restorative: Research, Education**
- **Replacement requirements enable and encourage innovation.**
- **Wetland reclamation commitments, as established through reclamation plans, will help inform the determination of replacement requirements.**
- **Wetland replacement will be spatially prioritized.**

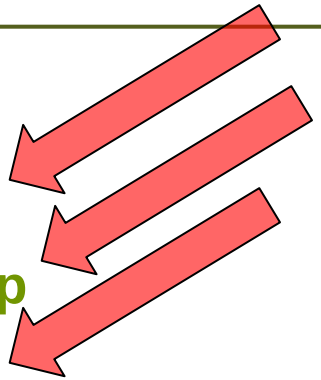


Policy Implementation

The Wetland Management System

Wetland Management System

1. Project Planning
   a. Merged Wetland Inventory
   b. Relative Wetland Value Map
   c. Integration and Alignment

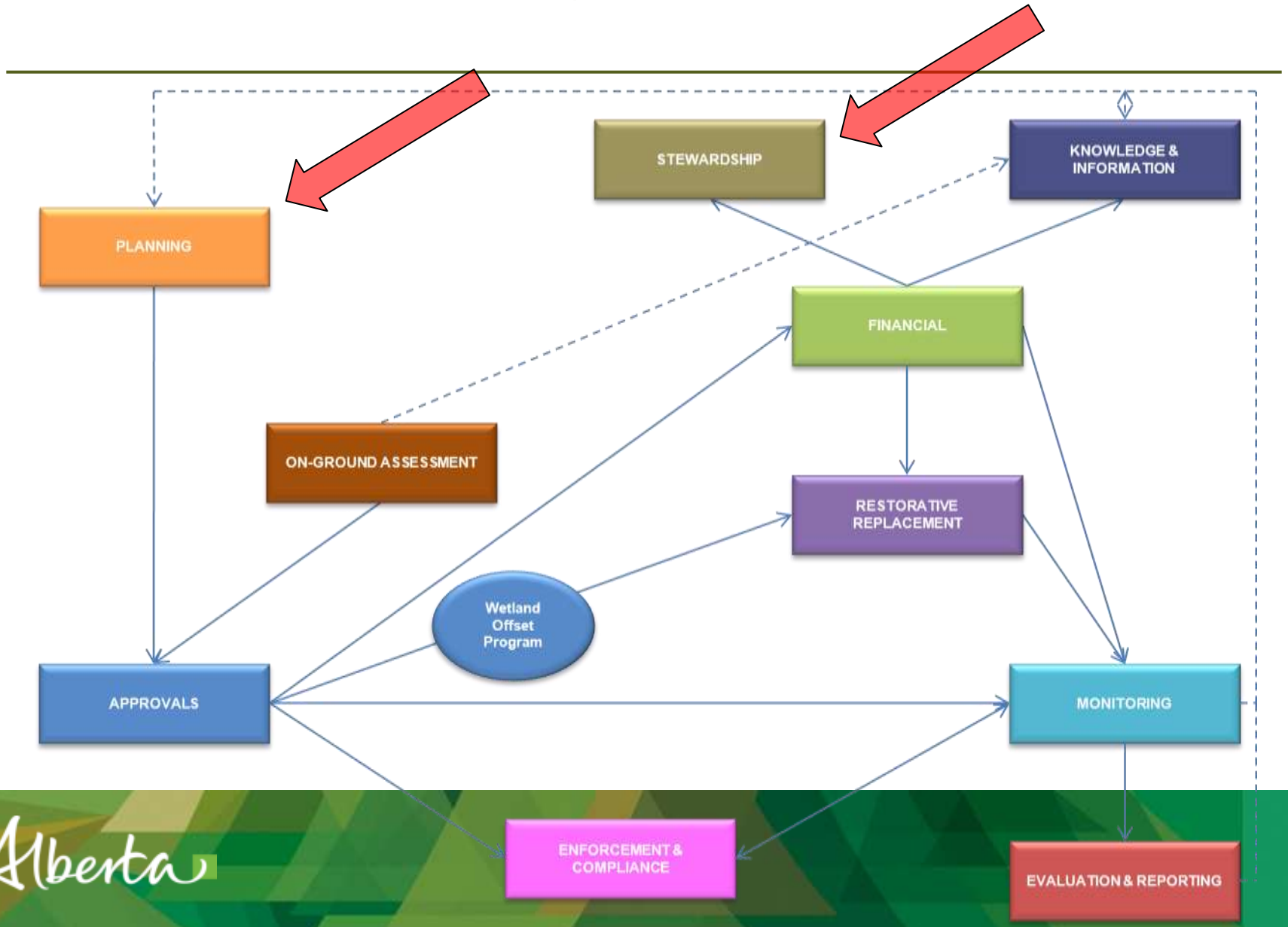


2. Wetland Assessment and Impact Report
   a. Alberta Wetland Classification System
   b. Wetland Delineation Protocol
   c. Wetland Rapid Evaluation Tool (ABWRET)
   d. Relative Wetland Abundance
   e. Qualified Wetland Science Practitioner

Wetland Management System

3. Application Submission
   a. Comprehensive Application Package
   b. Standardized Authorization Process
4. Approval Decision
   a. Offset Program
   b. In Lieu Fee Payment

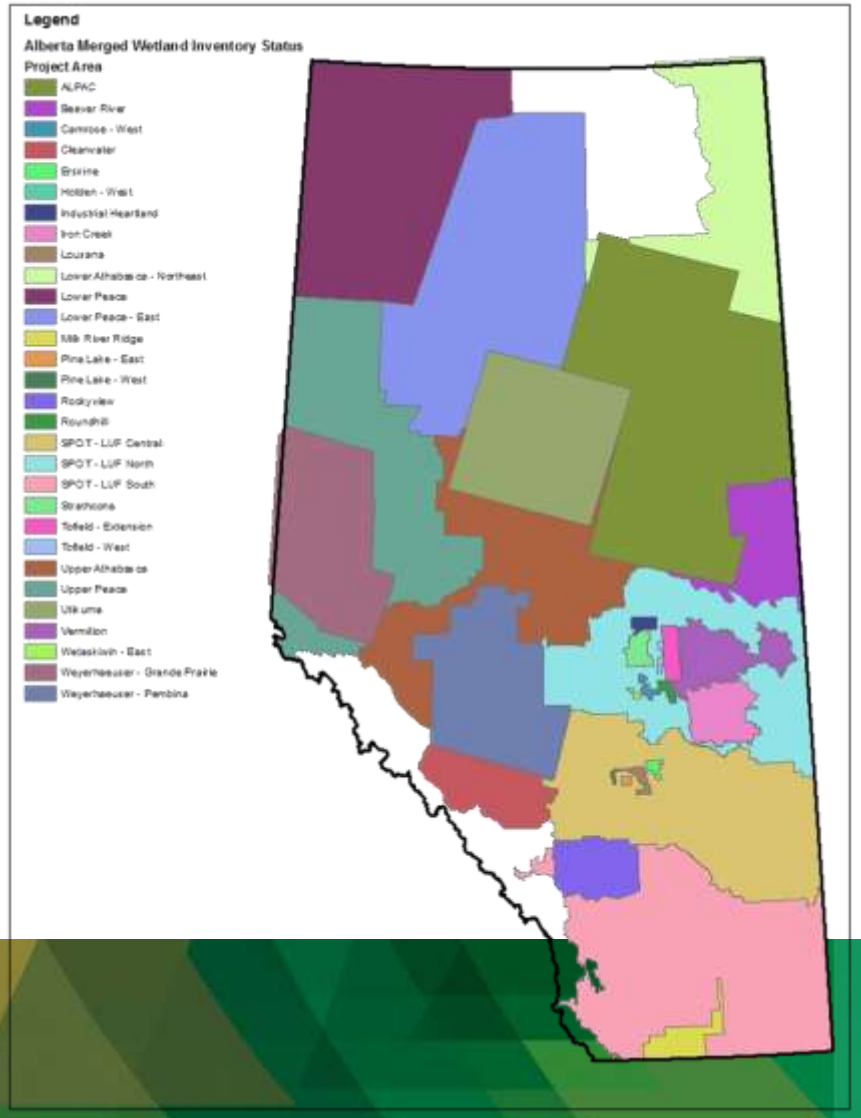
Wetland Management System



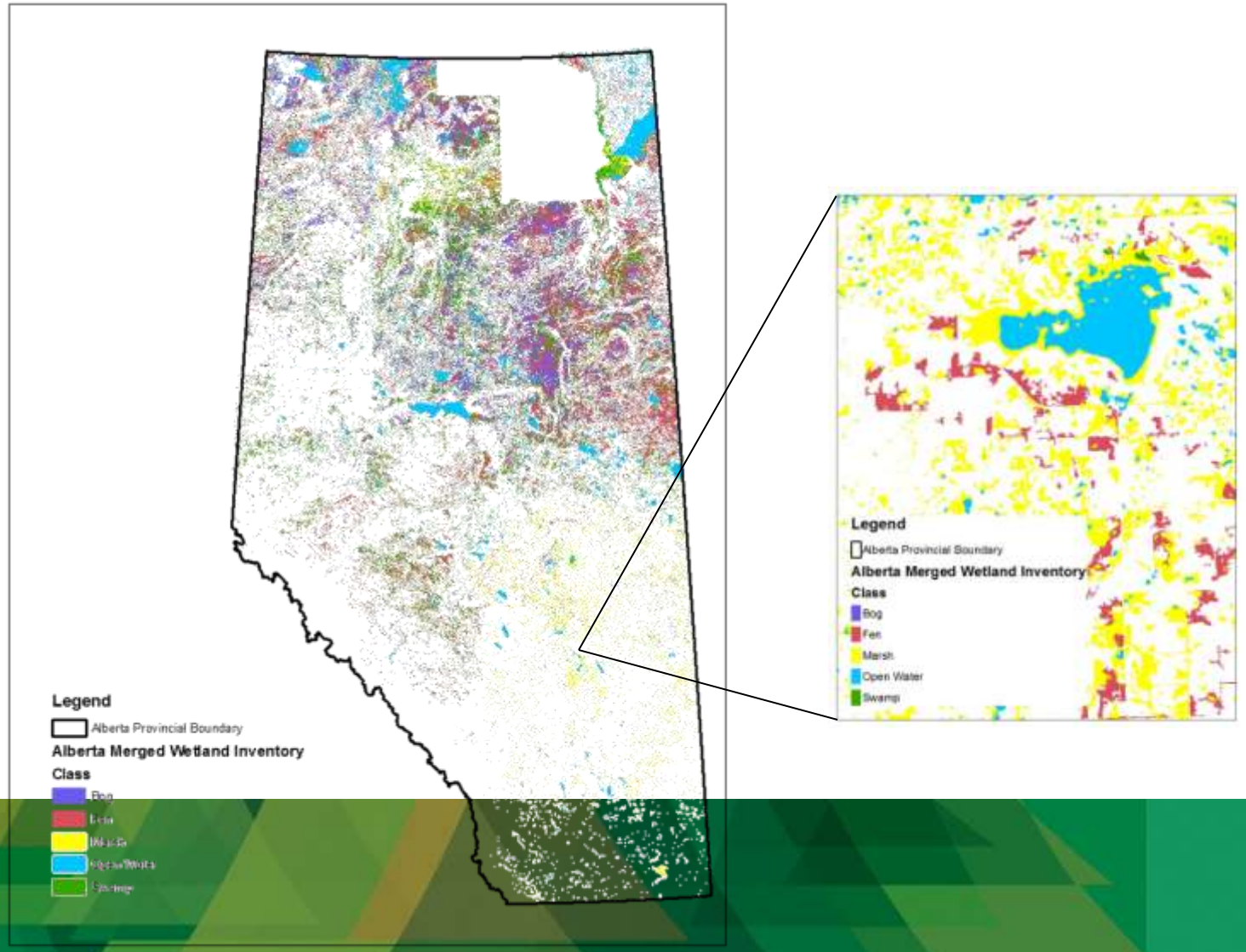
1. Project Planning

Merged Wetland Inventory

- Currently undergoing update.
- Based on best available data.
- Subject to continuous improvement.

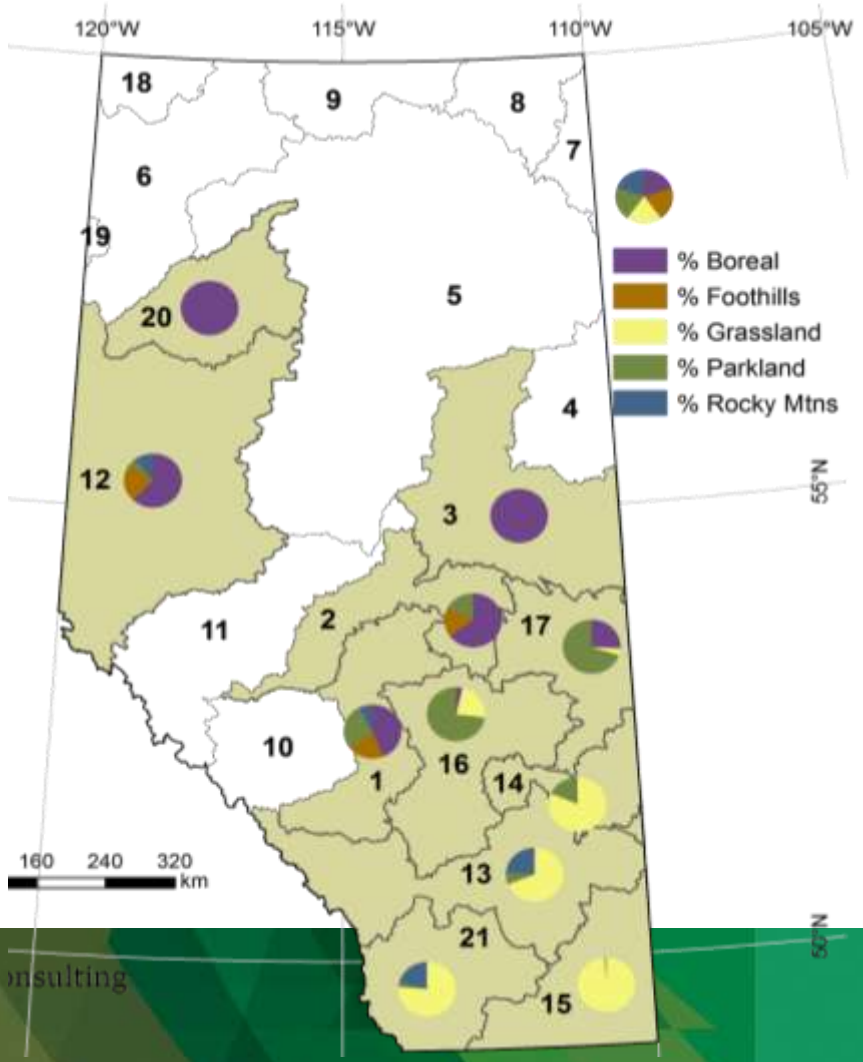


Merged Wetland Inventory



Relative Value Assessment Units

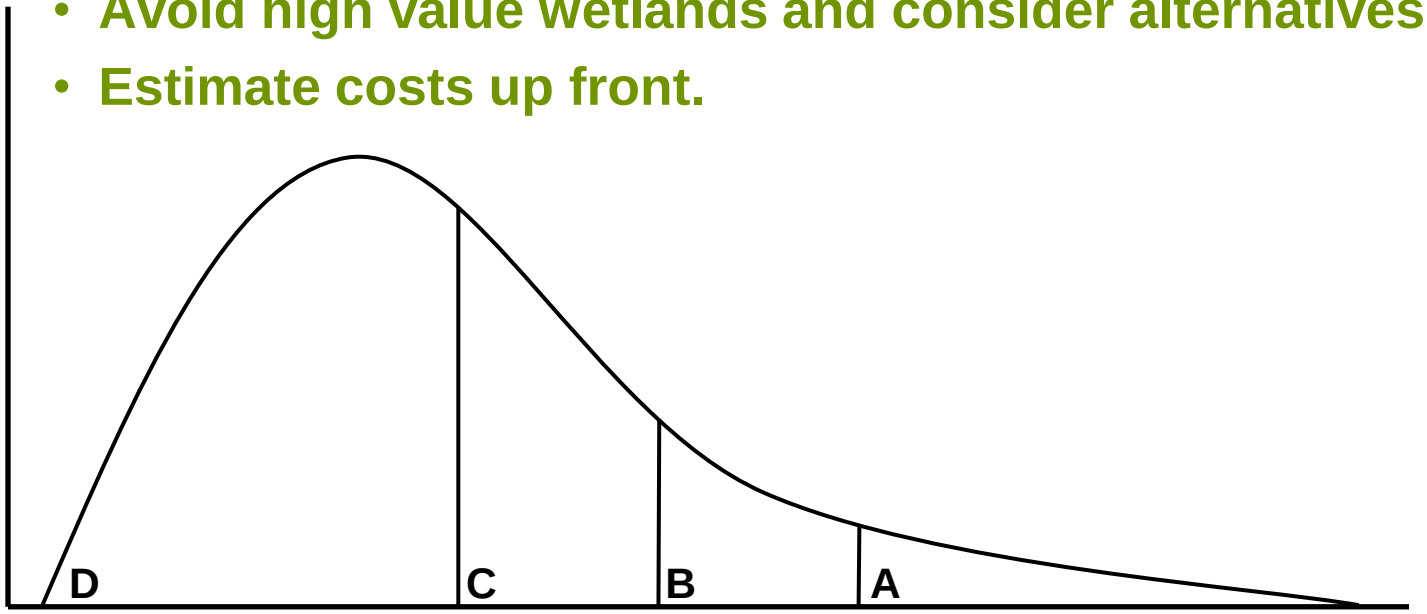
- **Relative Wetland Value Assessment Units enable *relative* assessment and replacement transactions.**
- **White Area implementation includes some boreal transition zone with peatlands (purple).**



Relative Wetland Value Map

Relative Wetland Value Map

- **Estimate map of a, b, c, d wetland values – Values are relative and constrained within RWVAUs (spatial context).**
- **Avoid high value wetlands and consider alternatives.**
- **Estimate costs up front.**



Wetland Policy Function Group	Off-site Tool Sub-function Group		On-Site Tool Sub-function Group	
Hydrologic Health	Water Storage		Surface Water Storage	
	Water Source (recharge vs. discharge)		Stream Flow Support	
	Water Transport Efficiency		Water Cooling	
			Water Warming	
Water Quality	Sediment Retention		Sediment & Toxicant Retention & Stabilization	
	Phosphorus Retention		Phosphorus Retention	
	Nitrate-Nitrogen Removal		Nitrate Nitrogen Removal	
Ecological Health	Aquatic		Aquatic	Organic Nutrient Export*
		Fish		Resident Fish Habitat
		Invertebrates		Invertebrate Habitat
		Amphibians		Amphibian Habitat
		Waterbirds		Waterbird Nesting Habitat
	Terrestrial	Songbird	Terrestrial	Songbird
		Raptor		Raptor
		Small Mammal		Small Mammal
		Large Mammal		Large Mammal
				Native Plant Habitat
				Pollinator Habitat
Human Use	Direct Human Use		Direct Human Use	

Integration and Alignment

- **Alignment Requirements:**
  - **Criteria checklist will be a required component of the application package**
    - enables identification of other considerations that may pertain to the wetland.
  - **Links to additional information on these requirements**
    - other jurisdictions (federal, municipal)
    - other permitting processes
    - other information (e.g., LAT tool, FWIMS, ACMIS, etc.)
- **Facilitate enhanced communication among province, municipalities, federal agencies, and stakeholders (WPAC/Stewardship Groups).**

Government of Alberta
Environment

Example:

Planning and Alignment Requirements

for a WATER ACT APPROVAL
PROVINCE OF ALBERTA

INTRODUCTION

[Water Act approvals are specific to…]

Prior to starting construction in a waterbody in Alberta, approval under the *Water Act* is required. **To obtain approval under the *Water Act*** please go to environment.alberta.ca and then select the "Information Centre" and search for "Water Act Approvals". To view *Water Act* application forms please go to srd.alberta.ca and search for "Water Act forms".

In order for a *Water Act* application to be considered complete, the applicant must *identify* all applicable alignment requirements in the "PLANNING STAGE – LANDSCAPE-LEVEL REQUIREMENTS" & "ASSESSMENT (WAIR) STAGE – SITE-LEVEL REQUIREMENTS" below. Note: the referenced process guidance will give further detail about what additional requirements are involved in the application process for each of the requirements.

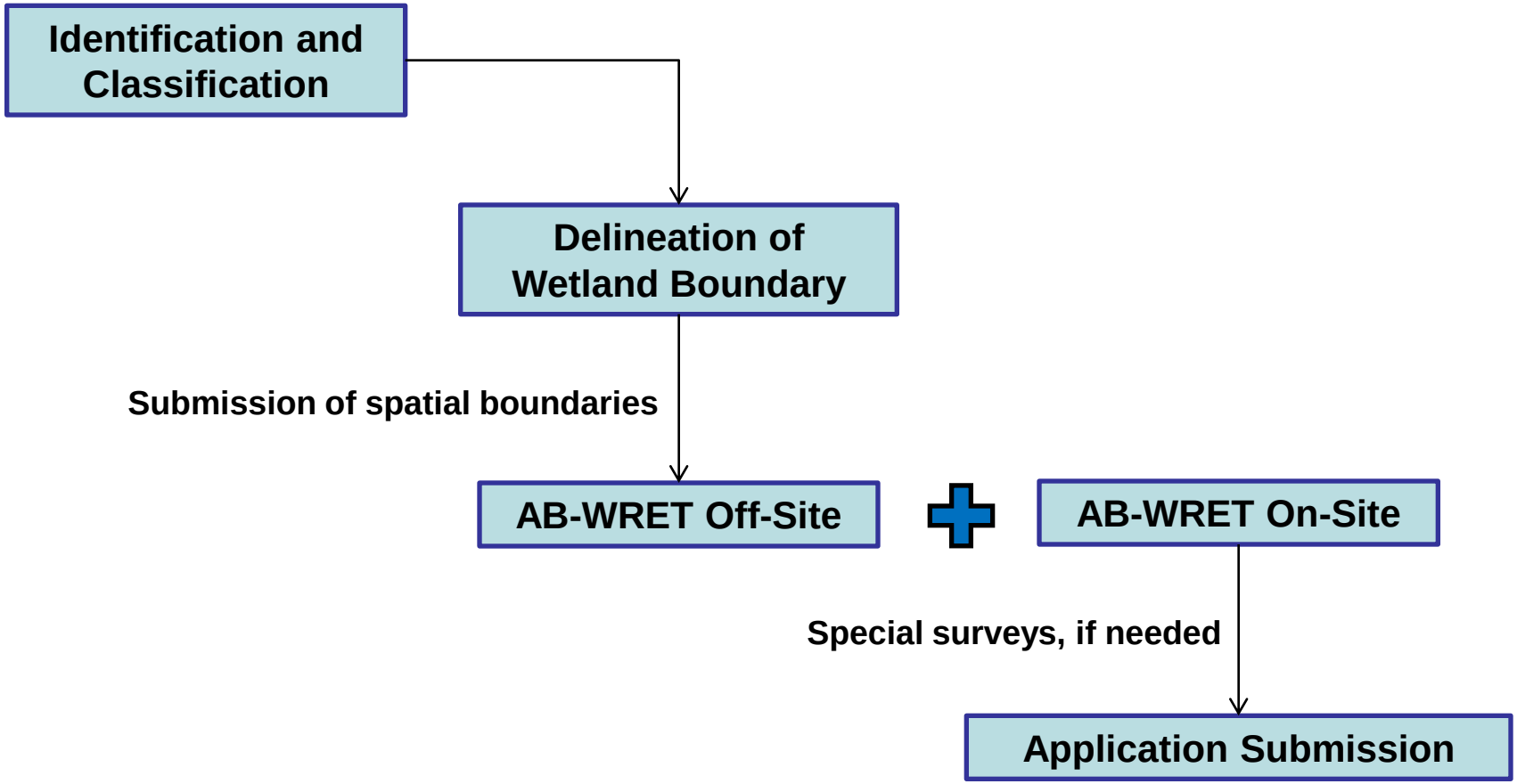
[More…]

PLANNING STAGE – LANDSCAPE-LEVEL REQUIREMENTS

YES / NO / UNSURE / TBD	ALIGNMENT REQUIREMENTS	PROCESS GUIDANCE
	Is the wetland of high value under Alberta Wetland Policy?	(link to RWVM?? and process guidance)
	Is the bed and shore claimed by the Crown? (Is the wetland permanent?)	(Public Lands Act, section 3 – Crown bed and shore claims, process guidance and link to process guidance)
	Is the water body within an area under Federal Species at Risk legislative restrictions?	(name and link to process guidance)

2. Wetland Assessment and Impact Report

WAIR


Identification and Classification
Delineation of Wetland Boundary
Submission of spatial boundaries
AB-WRET Off-Site
AB-WRET On-Site
Special surveys, if needed
Application Submission

Wetland Classification

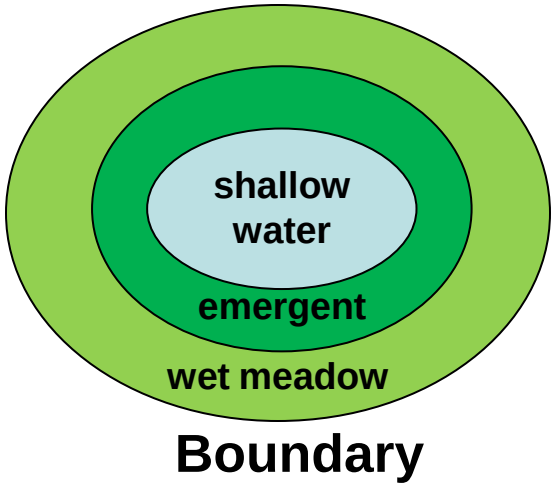
- **Alberta Wetland Classification System (AWCS):**
  - **New provincial system supports consistency in classification.**
  - **Merger of Stewart and Kantrud, and the CWCS**

CLASS	FORM	TYPE and sub-type
Bog (B)	Wooded (coniferous [Wc]) Shrubby [S]	freshwater (f), acidic pH <4.5 [a]
Fen (F)	Wooded (coniferous [Wc]) Shrubby [S] Graminoid [G]	freshwater (f), pH <5.5 (poor fen [p])
		freshwater (f), pH >5.5 to 7.0 (moderately-rich fen [mr])
		slightly brackish (sb), pH >7.0 (extremely-rich fen [er])
Marsh (M) [5]	Graminoid [G]	Temporary (II); freshwater (f), slightly brackish (sb)
		Seasonal (III); freshwater (f), slightly brackish (sb), moderately brackish (mb)
		Semi-permanent (IV) ; freshwater (f), slightly brackish (sb), moderately brackish (mb), brackish (b)
Shallow Open Water (W) [5]	Submersed or Floating [F]	Permanent (V); freshwater (f), slightly brackish (sb), moderately brackish (mb), brackish (b), subsaline (ss)
		Intermittent Saline (VI); saline (s)
Swamp (S)	Wooded (coniferous [Wc])[6] Wooded (mixedwood [Wm])[6] Wooded (deciduous [Wd])[6] Shrubby [S][6]	Temporary (II); freshwater (f) to slightly brackish (sb)
		Seasonal (III); freshwater (f) to slightly brackish (sb)
		Seasonal (III); moderately brackish (mb)

Wetland Delineation

- **Alberta Wetland Delineation Protocol**
  - **New White Area standard for demarcating ecological boundary**
  - **New requirement: wetland polygons to be submitted prior to application.**

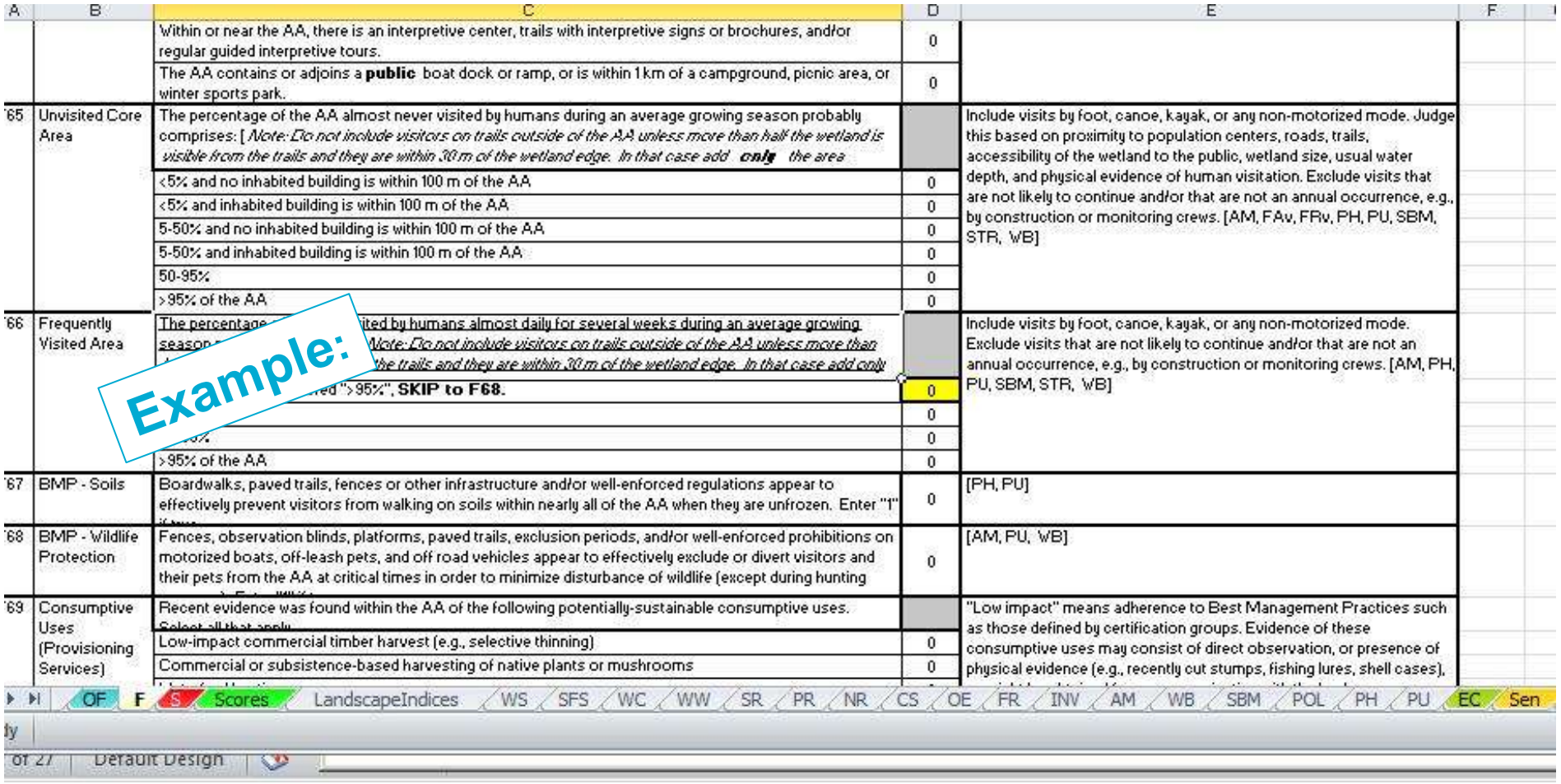
"Wetland boundary" refers to the farthest landward extent of a wetland, as identified by both physical and biological features. The boundary of the wetland can be demarcated by a change in vegetation from water-tolerant (hydrophytic) to upland species, and/or by visual changes in soil characteristics from hydric to non-hydric soils. This boundary forms the outer limit of a wetland regulated under the Alberta Wetland Policy.



AB Wetland Rapid Evaluation Tool

- **ABWRET**
  - **A combination of off-site (desktop) and on-site (field) inputs that informs the regulatory process (vs. planning map).**
  - **Provides a, b, c, d relative value that is converted to A, B, C, D final scores, based on relative abundance.**
  - **Abundance Modifier based on +1/0/-1 at the relative wetland value assessment unit level.**
- **Special surveys, as prompted.**
  - **Anticipates referral requests that may otherwise delay application process.**
- **Field assessment to be completed during growing season.**

AB Wetland Rapid Evaluation Tool



A	B	C	D	E	F
		Within or near the AA, there is an interpretive center, trails with interpretive signs or brochures, and/or regular guided interpretive tours.	0		
		The AA contains or adjoins a **public** boat dock or ramp, or is within 1 km of a campground, picnic area, or winter sports park.	0		
'65	Unvisited Core Area	The percentage of the AA almost never visited by humans during an average growing season probably comprises: [*Note: Do not include visitors on trails outside of the AA unless more than half the wetland is visible from the trails and they are within 30 m of the wetland edge. In that case add* ***only*** *the area*		Include visits by foot, canoe, kayak, or any non-motorized mode. Judge this based on proximity to population centers, roads, trails, accessibility of the wetland to the public, wetland size, usual water depth, and physical evidence of human visitation. Exclude visits that are not likely to continue and/or that are not an annual occurrence, e.g., by construction or monitoring crews. [AM, FAv, FRv, PH, PU, SBM, STR, WB]	
		<5% and no inhabited building is within 100 m of the AA	0		
		<5% and inhabited building is within 100 m of the AA	0		
		5-50% and no inhabited building is within 100 m of the AA	0		
		5-50% and inhabited building is within 100 m of the AA	0		
		50-95%	0		
		>95% of the AA	0		
'66	Frequently Visited Area	The percentage ... ited by humans almost daily for several weeks during an average growing season ... *Note: Do not include visitors on trails outside of the AA unless more than ... the trails and they are within 30 m of the wetland edge. In that case add only*		Include visits by foot, canoe, kayak, or any non-motorized mode. Exclude visits that are not likely to continue and/or that are not an annual occurrence, e.g., by construction or monitoring crews. [AM, PH, PU, SBM, STR, WB]	
		...ed ">95%", **SKIP to F68.**	0		
		...	0		
		...	0		
		>95% of the AA	0		
'67	BMP - Soils	Boardwalks, paved trails, fences or other infrastructure and/or well-enforced regulations appear to effectively prevent visitors from walking on soils within nearly all of the AA when they are unfrozen. Enter "1" ...	0	[PH, PU]	
'68	BMP - Wildlife Protection	Fences, observation blinds, platforms, paved trails, exclusion periods, and/or well-enforced prohibitions on motorized boats, off-leash pets, and off road vehicles appear to effectively exclude or divert visitors and their pets from the AA at critical times in order to minimize disturbance of wildlife (except during hunting ...	0	[AM, PU, WB]	
'69	Consumptive Uses (Provisioning Services)	Recent evidence was found within the AA of the following potentially-sustainable consumptive uses. Select all that apply		"Low impact" means adherence to Best Management Practices such as those defined by certification groups. Evidence of these consumptive uses may consist of direct observation, or presence of physical evidence (e.g., recently cut stumps, fishing lures, shell cases), ...	
		Low-impact commercial timber harvest (e.g., selective thinning)	0		
		Commercial or subsistence-based harvesting of native plants or mushrooms	0		
		...			

Example:

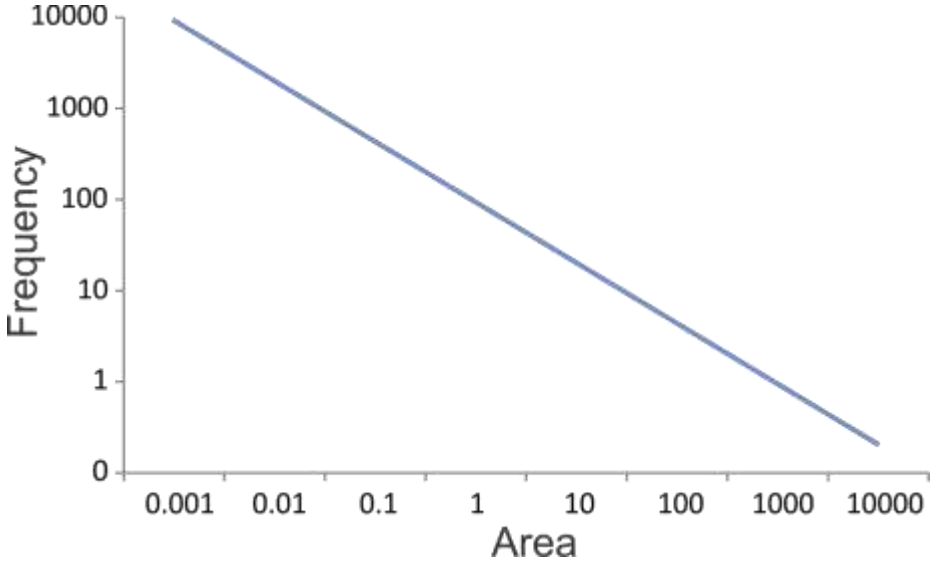
OF | F | S | Scores | LandscapeIndices | WS | SFS | WC | WW | SR | PR | NR | CS | OE | FR | INV | AM | WB | SBM | POL | PH | PU | EC | Sen

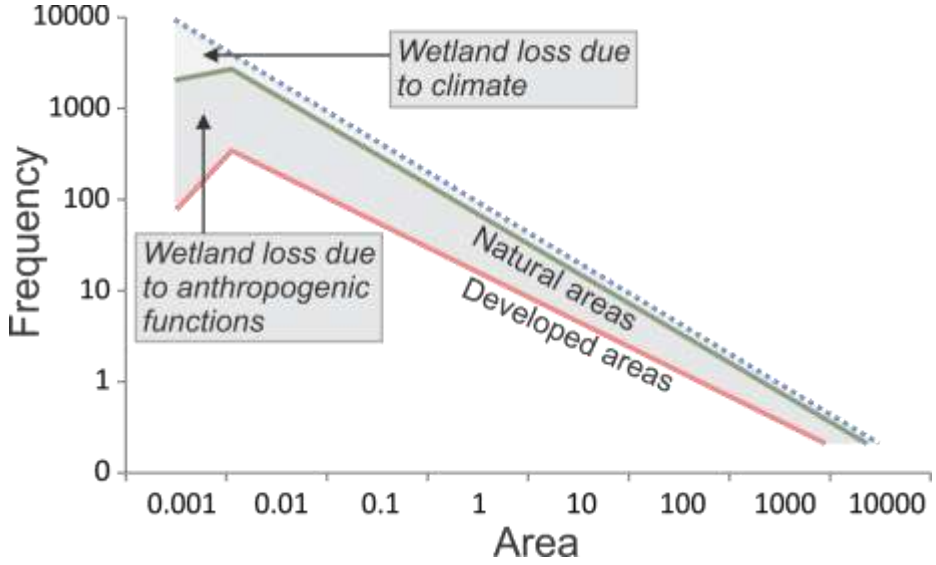
of 27 | Default Design

Alberta

Relative Wetland Abundance

- **Abundance Modifier**
  - **Reflects historical wetland loss, and provides the final relative wetland value score (A, B, C, D).**
  - **Modification factor (+1/0/-1) applied at the RWVAU scale.**





Wetland Science Practitioner

Qualified Wetland Science Practitioner:

- **Certified QWSP meets formal qualifications to perform a Wetland Assessment and Impact Report (WAIR)**
- **Qualifications to include:**
  - Education requirements
  - Professional experience
  - Membership in a professional organization
  - Completion of an exam
- **Certification system may be third party administered**
- **Training courses likely offered externally, but cross-referenced with GOA requirements**

3. Application Submission

Standard Process

- **Consistent, standardized process for submission of development applications:**
  - **AWP Administrative Procedures, Directives, and Guide**
  - **Application preparation (Wetland Assessment and Impact Report)**
  - **Fully informed planning stage, with comprehensive links to applicable resources, ensures submission of a complete and fully informed application package.**
  - **Consistent approach to application review, across regions and approval writers.**
  - **Wetland replacement protocol nested in Offset Policy Program.**

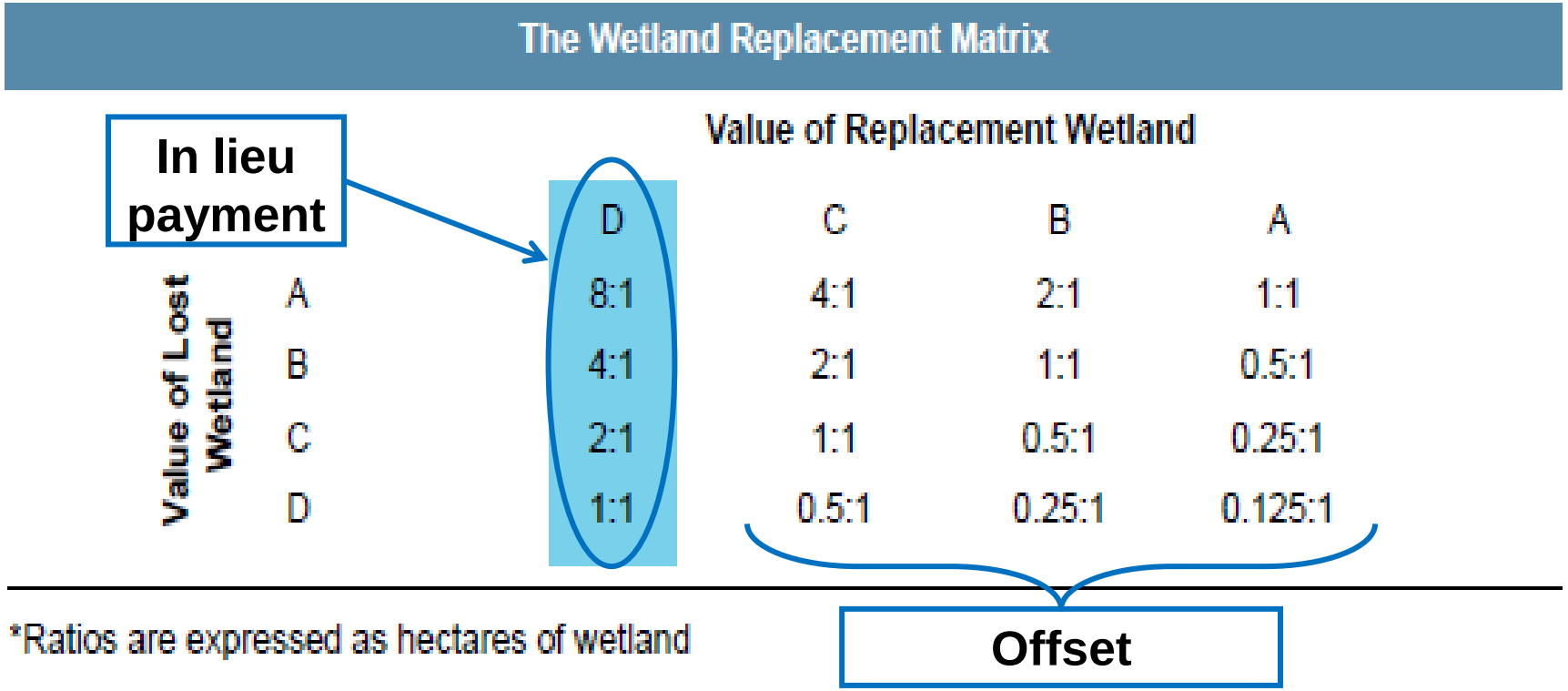
4. Authorization Decision

Authorization

Analysis of proponent engagement in the mitigation hierarchy:

- **Rationale for non-avoidance, including assessment of alternative options.**
- **Minimization and mitigation measures for both direct and indirect wetland impacts.**
- **Wetland replacement proposal and link to Wetland Replacement Protocols and Guidelines developed under the Offset Program.**

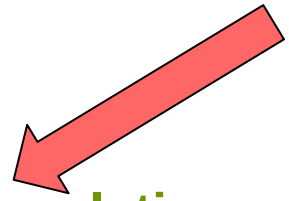
Replacement



Offset Program

- Actions taken at one location to balance anticipated undesired impacts at another location.
- Responsibility for delivery of offset and 5-year monitoring and remedial action:
  a. Proponent
  b. Third party (e.g., offset supplier/mitigation bank)
- Preferred offset activities (descending order)
  – Wetland Restoration, Enhancement, Construction
- Preferred geographic scale (descending order)
  – Close to site of impact and/or within local watershed, relative wetland value assessment unit, ecoregion, provincial…

PREDICTIVE TOOLS



In Lieu Payments

- **Fees paid, wetland loss, and wetland replacement info reported annually to ESRD and made public.**
- **Payment structure to undergo phased implementation:**
  - **Phase 1 (2014-17): Existing approach to persist, comprising direct payment to wetland mitigation agent.**
  - **Phase 2 (2017 onwards): In lieu payments are directed to a wetland replacement fund, which prioritizes reallocation:**
    - Current mitigation agent program ceases to exist.
    - Existing mitigation agents can apply to become wetland replacement agents.

Phased Implementation

- **Resource-intensive process with multiple deliverables.**
- **Focus is on enabling a consistent, transparent, and predictable process for Approval Writers & Proponents**
- **Key considerations are efficiency and effectiveness in the system:**
  - **streamlined approach to decision-making**
  - **Immediate term: tools, information, and training that enable effective management decisions.**
  - **Mid- to long-term: tools, data, and electronic infrastructure that will provide comprehensive and transparent access for all users and the public to a holistic wetland management system.**


Alberta
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Thank You!
Alberta