

**Sustainable Resource Development Standard
Recommendations to
Municipal Subdivision Referrals
(Includes Recommended Minimum
Environmental Reserve Widths)**

Background

Land-use planning in Alberta is governed by several pieces of legislation including the *Public Lands Act (PLA)* and the *Municipal Government Act (MGA)*. The *PLA* is administered by the Province and provides for the use and allocation of provincially owned lands. The *MGA* assigns municipalities with the responsibility of planning and regulating the subdivision and development of land within a municipality. The co-ordination of planning activities is a key factor in sustainable development and long-term use of provincial lands as well as achieving local economic development and land-use objectives.

Alberta Sustainable Resource Development (SRD) shares common interests with municipalities related to the conservation of the natural environment. Because conservation may be affected by the processes of land-use zoning, and subdividing and developing land, it is important for municipal and provincial planning efforts to use consistent approaches and pursue a high level of cooperation and coordination.

The provincial [Land Use Policies](#), approved by Order in Council 522/96 supplement the planning provisions of the *MGA* and the Subdivision and Development Regulations and help municipalities with harmonizing provincial and municipal policy initiatives at the local land-use planning level.

A number of key resource management areas are recognized in Sections 5 and 6.3 of the provincial *Land Use Policies*, specifically:

- landscapes with ravines, valleys, stream corridors, lakeshores, wetlands and areas of wildlife habitat;
- areas prone to flooding, erosion, landslides and subsidence;
- water resources, including sensitive fisheries habitat and aquatic resources; and
- areas that allow public access to these public resources.

To meet the intent of the provincial *Land Use Policies* and to assist municipalities to establish land use patterns and mitigative measures to minimize negative impacts on natural resources, SRD provides municipal authorities the following considerations and guidelines for minimum environmental reserve/easement widths.

Goal

SRD's goal is to have adequate riparian buffers established between a proposed development and a lake, river, watercourse, or wetland. SRD strongly supports the use of Environmental Reserve lands that support a reserve's protective functions. Activities such as clearing of vegetation, infilling, slope re-grading or excavation, drainage into or out of, discharge of effluents, or disposal of debris or other waste can impair those protective functions. SRD strongly supports municipalities in using all available tools and best management practices available to them to ensure that the long-term integrity and functionality of Environmental Reserve lands are maintained. These tools include, but are not limited to, by-laws and conditions on development permits that:

- reflect the sensitivity of the lands and which are likely to continue to preserve the functions that a healthy riparian area provides;
- ensure Environmental Reserves are not affected by grading of adjacent lots prior to construction and development arising out of the subdivision and development process. For example, the use of Grading Permits would provide a mechanism where erosion and sediment control measures can be directed to prevent pollution of aquatic environments;
- ensure the protection of tree cover in areas deemed to be environmentally sensitive, especially in areas adjoining water bodies and watercourses, or where lands are subject to erosion or slope failure; avoid, wherever possible, the enclosure of long stretches of a natural watercourse so that they continue to remain above ground. SRD encourages municipalities to utilize bridges at larger or more sensitive streams rather than culverts; and
- incorporate natural wetland areas into green space and park systems wherever possible with sufficient buffer areas to facilitate their long-term sustainability.

To assist municipalities in incorporating the *Land Use Policies* into municipal planning and orderly development responsibilities, SRD provides the following Environmental Reserve recommendations in Tables 1 and 2 (attached). These recommendations were developed based on:

- past recommendations provided to municipalities;
- knowledge of approaches or enhanced provisions some municipalities are currently implementing within their own policies; and
- a synthesis of approaches currently being adopted by other Canadian municipalities to deal with development involving hazard lands or development near water bodies.

Sustainable Resource Development Recommended Guidelines for Minimum Environmental Reserve/Easement Widths

In reference to Section 664 of the *Municipal Government Act*, the following are recommended where a boundary to a proposed subdivision is a water body or watercourse.

Table 1. Standard recommended minimum widths for Environmental Reserves or Environmental Reserve Easements based on type of water feature.

Water Feature	Minimum ER Width ²	Notes
Reservoirs & Regulated Lakes	30 m from right of way or easement boundary	A regulated lake is a lake where water levels are established to a predetermined elevation and actively managed through use of a licensing requirement (e.g. to pump water into the water body).
Lake (natural & controlled)	30 m from natural boundary	On controlled lakes, 30 m from sill elevation of licensed control structure.
Swamp/wetland ¹	Variable, include wet meadow zone	Wet meadow zone can be extensive in some situations, and in these instances the ER should be wide enough to preserve ecological function.
Large River (≥ 15 m width)	30+ m	See additional requirements for hazardous lands.
Small River/Large Stream (6-15 m)	15 m	See additional requirements for hazardous lands.
Medium Stream (3 - 6 m)	10 m	See additional requirements for hazardous lands.
Small Stream (≤ 3 m)	6 m	See additional requirements for hazardous lands.
Ephemeral watercourse (no defined channel)	0 m	Use bylaw to regulate tree cutting within a defined distance from feature to maintain riparian vegetation and drainage.
Braided Stream	10 m from outside boundary of active floodway	

¹ Sustainable Resource Development views the term "swamp" to mean any area with hydrological conditions of sufficient duration to have developed saturated soils and hydrophytic vegetation (i.e. wetlands or peatlands).

² In addition to the recommended ER width for the water feature itself, associated landscape features may require the ER width to be modified to factor in additional inherent hazards to development.

For lands described in section 664(1)(b) of the *Municipal Government Act* (unsuitable for development because they are subject to flooding, have high risk of erosion, or have existing topographical or geo-technical constraints) the following are recommended.

Table 2. Additional factors that may necessitate an increase in the width of an Environmental Reserve or Environmental Reserve Easement.

Hazardous Lands	ER Modifier	Notes
Floodplain	<ul style="list-style-type: none"> The width of the 1:100 year flood line or 30m from the natural boundary of a watercourse or lake, whichever is less. The width of meander belt for watercourses that tend to meander or entire floodplain if it is highly constrained within a confined valley. 	<ul style="list-style-type: none"> Residential development within a floodplain is discouraged. Development within flood fringe area should only be considered if flood proofing undertaken to reduce risk of flood damage. Flood risk mapping or delineation of the 1:100 year flood line generally defines the extent of expected flood occurrence (see Alberta Environment policy and guidelines). The width of a meander belt is determined by multiplying bankfull width by 20 for each reach, and is split equally on either side of creek along axis of meander belt.
Erosion prone areas	Provide for a toe erosion allowance.	Consider highly erosive soils and annual recession rates.
Gully, ravine, coulee, or valley escarpments	Provide for a stable slope allowance. Apply construction and building setbacks from this line.	Boundary of stable slope allowance measured from top of crest of plateau (terrace), valley slope or tableland.
Steep Slopes (>15%)	3X escarpment height or as recommended by a geotechnical report on slope stability, rate of erosion, etc.	