

EFCL Position on Top of Bank Policy

September, 2009

Edmonton's river and ravine valleys are special places valued by residents in all communities of Edmonton, and they are an important amenity for neighbourhoods which abut the valleys. Over one third (51) of the community league neighbourhoods abut the valleys, and several new neighbourhoods will be developing along valleys.

Over the years EFCL has been involved in a number of workshops and meetings regarding a Top of Bank policy to guide urban development which abuts the river and ravine valleys. EFCL is pleased that the City is moving ahead to adopt a Top of Bank policy to meet the following objectives:

- a) Ensure that urban development is reasonably safe from environmental hazards, such as slope instability and failure, flooding or fire that may result in loss to persons and property.
- b) Protect river valley and ravine system from urban development that may compromise its integrity and long term stability.
- c) Provide optimal access for local residents and the general public to a continuous circulation system along the entire length of the Upland Area abutting the river and ravine system.
- d) Ensure preservation of the river valley and ravine system as a significant visual and natural amenity feature, contributor to the ecological functionality of the City's natural areas system and recreational opportunities for the citizens of Edmonton.

To achieve these objectives, EFCL has a number of recommendations for the Top of Bank policy.

1. **Safety and Stability**

- EFCL supports the use of geotechnical studies to determine the Urban Development Line – the line that separates developable land from Top of Bank (TOB) environmental reserve land, and determines at what points the land is stable enough for roads and built forms. EFCL recognizes the importance of geotechnical studies which would expand, as needed, the environmental reserve setback beyond a minimum setback.
- The geotechnical reports provide a scientific estimation of the level of stability of the top of bank land, but the studies do not guarantee knowledge of all relevant existing or future factors. EFCL recommends a minimum setback of 15 meters which allows for a greater range of error than the 7.5 meter minimum setback in present policy, and allows for adequate public access for safety reasons.
- The 15 M minimum setback from the crest of the valley allows for a 5 M public right of way required for emergency vehicles used in the trail system, a narrow 3 M firebreak between private property and the natural area if there is no TOB Roadway, and a minimum of 7 M of undisturbed natural area to protect the stability of the Environmental Reserve area as well as provide a wildlife corridor.
- In general the TOB Walkway should be placed at least 7 M from the crest in order to protect the vegetation which enhances the stability of the crest area, and ensures the longevity of the walkway. Previously, some walkways have disappeared due to slumping.

2. **Access & encroachment:**

- EFCL acknowledges that TOB Roadways provide the best access for slope repair, geotechnical monitoring, fire fighting, emergency vehicles, best drainage control and best method of dealing with encroachment issues; however, EFCL has not taken a position on what percentage of the land abutting valleys and ravines should have a TOB Roadway. One advantage to not having a TOB Roadway is that buildings and/or forested land can provide, for walkway users, a visual and audio buffer from auto traffic.

- For optimal access for non-vehicular circulation and recreation purposes, EFCL supports providing a 100% continuous walkable right of way, whether or not there is a TOB Roadway. Top of Bank walkways are popular walking routes which bring neighbours in contact with each other, creates social connections and contributes to building strong communities.
- The walking distance between access points to the Top of Bank walkway should be no greater than 120 meters in the urban development area. This distance is consistent with other City recommendations for urban development. The Walkable Edmonton Strategy Report recommends the distances between pedestrian connections be no greater than 100 meters; and the draft New Neighbourhood Guidelines recommend block lengths of 90 M to 120 M. The maximum distance of 120 M between access points also provides reasonable access for emergency purposes, and provides safety measures for pedestrian access and egress.
- Where there is no TOB Roadway, the access points to the TOB walkway must be able to accommodate emergency vehicles.
- Access points to the TOB walkway should be highly visible.
- Where there is no TOB Roadway, require a permanent border or fencing which clearly defines the property line, thus discouraging encroachment and thereby preserving the public land for public use and emergency access as well as protecting the stability of the bank.
- Use Crime Prevention through Environmental Design principles in the design requirements for private property fencing abutting TOB including requiring visually permeable fencing allowing for clear sightlines.
- Set significant fines and cost-recovery remedial procedures for encroachment and for activities on private land abutting the public land that could cause instability, e.g. sprinkler systems. Funds for additional Bylaw enforcement officers are required to monitor and enforce the TOB policies. Monitoring is especially important in areas where there is no TOB Roadway. Monitoring and enforcement would apply to existing and new developments abutting valleys.

3. Clear operational definitions for effective policy

- To effectively implement a Top of Bank Policy and evaluate whether the policy is being followed, there must be clear definitions and methods of establishing the a) Crest (Top of Bank Line), and b) the Urban Development Line (UDL).
- In descriptive terms, the **Crest (TOB line)** is defined as the uppermost valley break, slope edge or distinct topographic change between the upland area and the valley system. This definition needs to be operationally defined by topographic and geological measurements so that there is less ambiguity in the determination of the line. The crest should be determined by topographical and geological surveys, not by 'eyeballing' the slope. The minimum development setback will be measured from the crest (TOB line).
- In descriptive terms, the **Urban Development Line (UDL)** is the line demarcating the transition between lands suitable for urban development and lands not suitable for development. The land not suitable for development due to environmental hazards or requirements for public access is referred to as **Environmental Reserve**. Section 664 of the Municipal Government Act states this land must be kept in its natural state or be used as a public park.
- The types of scientific studies and criteria required to identify the Urban Development Line must be clearly defined in the TOB policy. The City has made progress in this regard by identifying the **Estimated Long Term Line of Stability** as the primary scientific methodology used by geotechnical engineers for determining slope instability and failure. The City's draft TOB Policy specifies acceptable ratings of stability for the construction of roadways, and for the construction of buildings.

- The policy should also define the acceptable rating of stability for the development of walkways. The integrity of walkways needs to be protected as well.

4. **Scope of TOB policy**

- The TOB policy should be used in the development of Area Structure Plans for new neighbourhoods and industrial areas, and infill development.
 - Large infill development sites and medium and high density infill developments should be required to adhere to the development setback policies and provide a public right of way which is in or abutting the environmental reserve.
5. To comply with the Municipal Government Act and help ensure consistent application of the TOB policy, provisions in the **policy should be incorporated into the Zoning Bylaw.**