
CITY OF KELOWNA

MEMORANDUM

Date: August 5, 2009

File No.: 6300-01

To: City Manager

From: Director of Policy and Planning

Subject: Tree Management Policy Report

Report Prepared by: Maria Stanborough, Planner Specialist

RECOMMENDATION:

THAT Council receive for information the August 5, 2009 report of the Director of Policy and Planning regarding tree management policies;

AND that Council direct staff to prepare a budget submission for an overall Urban Forestry Strategic Plan for the 2010 budget process.

BACKGROUND:

In 2008, following a report to Council regarding "Kelowna Vegetation Studies and Policy Implications," staff was directed to "identify potential policy changes . . . to implement directions reflected in [the Urban Forestry Supervisor's] Report." To address this direction from Council, staff reviewed existing policy to-date.

In 1992 the City conducted a 'Significant Tree Inventory' for the Inner City Sector. The area of the study was defined by the base of Knox Mountain to the north, Spall Road to the east, K.L.O Road to the south, and Okanagan Lake to the west. The objectives of the report included "to develop a methodology and cataloguing system for the Heritage Tree Inventory" and "to develop policies respecting means of protecting and enhancing appropriate identified Heritage Trees within the City of Kelowna." In total, 53 species of trees were identified as heritage, for a total of approximately 200 trees. It is not known how many of these trees still exist today.

In 1993, a 'Heritage Tree Inventory' was conducted for the Rutland Sector. In total 40 trees and 9 groves were identified, encompassing 18 different species of tree. It is also not known how many of these trees exist today.

In 2002, staff made a presentation to Council regarding "Vegetation Policies, Bylaws and Programs." At that time Council directed staff to contact landscape architects in the community regarding any amendments to "Boulevard Landscaping," (Design Guidelines) Section 6, Schedule 4 of Subdivision, Development and Servicing Bylaw 7900. The Design Guidelines regarding landscaping in the Subdivision Bylaw are still under review. In the draft version, tree protection is recognized as criterion for reviewing Landscape Plans in regard to public property.



In 2007, the Parks department did an Urban Forest Effects (UFORE) analysis of the City's tree inventory as well as a Street Tree Resource Analysis (STRATUM) for the City of Kelowna, with the assistance of the US Forest Service. At this time, it was established that three types of trees make up the majority of the total tree canopy within the City of Kelowna: fir, apple and pine. The UFORE analysis included a tree canopy assessment. This assessment determined that the current tree canopy for the City of Kelowna is approximately 13%. For a city with Kelowna's climate, the ideal tree canopy is unknown, but one group (American Forests) has suggested a goal of 25% tree canopy.

In regard to Provincial Greenhouse Gas Reduction legislation, at the time of the UFORE analysis, Kelowna's trees sequestered about 7,400 metric tons of carbon per year. A 25% tree canopy would approximately double this measure. A single mature tree can absorb carbon dioxide at a rate of 48 lbs/year whereas a healthy less mature tree absorbs about 13 pounds of carbon annually. However, the current tree canopy is at risk from the western and mountain pine beetle. The pine beetle infestation is anticipated to kill 80% of all Ponderosa Pine and other pines planted in the Kelowna area. The beetle destruction will result in a 20% reduction of the existing tree canopy.

When considering the significance of an overall tree management program, trees are significant sources of carbon sequestering and GHG reductions. As well, trees offer other benefits to the community including:

- Visual interest & improved neighbourhood aesthetics
- Shading of roadways that extends the life of the pavement
- Storm water management and improvements to water quality
- Energy savings for buildings located near trees (cooler in summer, warmer in winter)
- Improved property value for housing with treed landscaping
- Wildlife habitat for a variety of species

The current Tree Protection Bylaw 8041 provides a measure of protection for trees in Natural Environment/Hazardous Condition Development Permits Areas as established by Kelowna's Official Community Plan Bylaw No.7600, specifically for riparian areas and slopes greater than 30%. The trees addressed in this bylaw, however, are only a small portion of the total tree cover. As well, the existing bylaw also does little to encourage further tree planting.

A comparison with other municipalities suggested that there exists opportunity for Kelowna to extend its tree protection. Although tree protection bylaws vary from one municipality to another, some trends do appear. A survey of seven similar municipalities found the following (see "Schedule A" for details):

- Tree protection bylaws for trees on private land are in place at many local and/or similar municipalities as a means of improving quality of life for local residents and maintaining/improving environmental conditions.
- Heritage (significant/landmark) trees are protected, requiring a permit for their removal.
- Protection is offered to specific species of trees depending on the locale.
- Trees on private developed land are protected, with more protection the larger the tree. This level of protection is often related to the size of the property.
- Subdivision is indicated to be an important time for implementing tree protection policy.
- In tree protection bylaws exceptions are made to commercial tree growers, property owners with hazardous trees, trees within building and driveway envelopes, and trees impeding public works.
- Tree plans can be required at the time of building permit, development permit and subdivision application.
- Tree removal permits can be linked to the requirement of planting replacement trees.
- Many municipalities are at the same point of beginning a tree protection bylaw update given the improved opportunities for development permits identified in the Local Government Act.

As can be seen from the experience of other municipalities, tree policies can vary significantly from one jurisdiction to another. The purpose of an Urban Forestry Strategic Plan would be to identify approaches that would be best suited to Kelowna's particular conditions. These could include, but are not limited to, a public education campaign, a tree management information brochure for community use, an updated tree protection bylaw, and a public tree planting program supported through the City. It is recommended that staff will come forward with a 2010 budget submission for an overall Urban Forestry Strategic Plan that will address public education, incentive programs as well as potential Tree Protection Bylaws, Official Community Plan Policy, Subdivision Policy, and Hillside Management Policy.

EXTERNAL AGENCY/PUBLIC COMMENTS:

Consistently, Kelowna residents and visitors place a high value on the natural landscape of the area, and emphasize the need to conserve green space in order to maintain and improve local quality of life.

From May to June 2006, as part of the Future OK initiative, the public was consulted on issues related to sustainability. The objectives of the initiative included developing a stronger mandate for action to work towards a sustainable Central Okanagan region, and to develop a locally-generated definition of sustainability to guide that momentum. Results from the consultation process showed that participants placed 'green space' as their top priority, with 'environment' as third.

In the January 2009 survey for the Official Community Plan review, survey respondents prioritized green space and trees. When asked to "[s]elect the statements which reflect how you would see future population growth accommodated," respondents indicated:

- More green spaces should be included in new developments
- Developer fees should increase to provide more funds for acquisition of park space
- More green space (boulevard strips, etc.) should be included with road projects

When asked to identify their top three measures to address climate change, respondents indicated "plant more trees" was the second highest priority. When asked where Kelowna was perceived as NOT achieving the characteristics of the respondents' vision of an ideal city, "green space" was identified in 61% of the responses.

Finally, in a survey conducted for the Official Community Plan review in May-June 2009, survey respondents were asked to rate the meaningfulness of a variety of measures to determine the impact of future land use scenarios. The highest rating measures were: amount of natural area preserved in the City (73% of respondents rated this measure as very meaningful); and, access to existing parks (70% of respondents rated this measure as very meaningful). This recent survey confirmed, once again, the importance of natural landscapes to the local community.

INTERNAL CIRCULATION TO:

Director, Development Services

Director, Land Use Management

General Manager, Community Services

Manager, Environment and Land Use, Land Use Management

Manager, Parks

Parks Planning Manager, Infrastructure Planning

Subdivision Approving Officer, Development Services

Urban Forestry Supervisor, Parks

LEGAL/STATUTORY AUTHORITY:

The Community Charter, section 8 (3) states that "A council may, by bylaw, regulate, prohibit and impose requirements in relation to the following: . . . (c) trees."
Local Government Act, Section 919.1 (1) (a), (b) and (j)
Local Government Act, Section 923

EXISTING POLICY:

Tree Protection Bylaw 8041
Municipal Properties Tree Bylaw 8042
Nuisance Trees and Shrub Bylaw 6469

LEGAL/STATUTORY PROCEDURAL REQUIREMENTS:

None

COMMUNICATIONS:

Should the project ultimately receive budgetary approval, there would be stakeholder and public consultation throughout the Strategy research and design stages.

PERSONNEL IMPLICATIONS:

In order to administer a Tree Management Program, there may be staffing implications for Urban Forestry (Parks) and Bylaw Enforcement. Depending on fees and bylaw changes there is potential staffing increases required may be done so through a revenue neutral position.

Considerations that were not applicable to this Report:

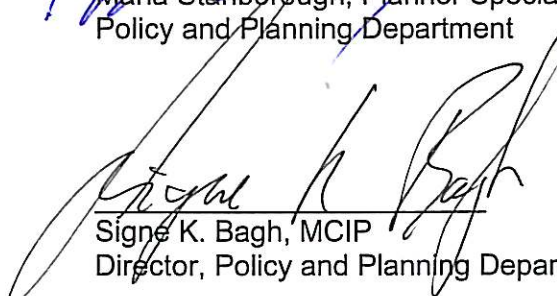
FINANCIAL/BUDGETARY CONSIDERATIONS:

TECHNICAL REQUIREMENTS:

ALTERNATE RECOMMENDATION:

Submitted by:



Maria Stanborough, Planner Specialist
Policy and Planning Department

Signe K. Bagh, MCIP
Director, Policy and Planning Department

Approved for Inclusion:



Jim Paterson
General Manager of Community Sustainability

cc: Deputy City Clerk

SCHEDULE A

TREE PROTECTION BYLAWS IN SIMILAR MUNICIPALITIES/DISTRICTS

Vernon

Adopted the Tree Protection Bylaw in 1996 and amended that year. The bylaw encompassed (1) the mapping of trees on City property; (2) the mapping of significant trees, and; (3) restrictions so that "No person shall damage, destroy or remove any tree, the stem of which exceeds eight (8) centimeters in diameter at one metre above the average ground level of the base of the tree, without a permit to do so." Exclusions to this were residential property owners with land less than 1,114 sq. m. (approx. ¼ of an acre), commercial fruit tree orchards, or property owners with trees identified as Hazardous Trees.

Exceptions were also made at subdivision for trees identified within building and driveway envelopes, and trees that would impede the construction and use of roads and services within the subdivision. Restrictions were placed on logging lands.

Kamloops

Bylaw for the Management and Protection of Trees on Private Lands within the City, adopted February 1998. Protects trees more than 5 metres in height or 10 cm in diameter, and on privately owned parcels of land more than 2 ha in size. Trees exempted include hazardous trees, trees on managed forest land, trees on lands with an approved subdivision plan, or trees impeding public works. Minimum fine of \$100 and not more than \$500 for a first offence, and not less than \$1,000 for each tree for a subsequent offence.

Prince George

Adopted the Tree Protection Bylaw in 1995, amended in 2007. Protects trees in Greenbelt areas, and riparian protection development permit areas as designated in the Official Community Plan. Fines ranged from \$2,000 to \$10,000.

Maple Ridge

Adopted the Tree Protection Bylaw in 2001. Protects trees having a 10 centimetre diameter at 150 centimetres above the natural grade which are:

- a. on any parcel of land in the Urban Area that has sufficient lot area to create two or more new lots within the requirements of the existing zoning pursuant to Maple Ridge Zoning Bylaw No. 3510-1985;
- b. on any parcel of land in the Urban Area that is 1 acre (0.4 hectares) or greater in size;
- c. within a Development Permit Area;
- d. on land owned by the District or in the possession of the District;
- e. identified for retention as part of a subdivision approval, development permit or building permit;
- f. within a Forest Reserve;
- g. wildlife trees;
- h. on slopes of 1:3 (rise over run) or greater;
- i. within a Watercourse Protection Area;
- j. within a Heritage Tree Protection Area;
- k. within a Geotechnical Protection Area.

Exceptions are made for trees that are hazardous, impeding services installation, or within building, driveway or roadway envelopes. Fines for contravention of bylaw not to exceed \$10,000.

Victoria

Adopted Tree Preservation Bylaw in 2005. Trees protected by this bylaw include 7 specific species of trees, trees identified as significant, any tree over 80 cm in diameter, trees on steep slope, trees retained voluntarily as part of a development permit application, trees protected by covenant, and three species of tree saplings. Trees exempted are hazardous trees, trees within building or driveway envelopes, and trees impeding public works. Fines begin at \$1,500 for a first offense, and \$3,000 for a second offense.

District of North Vancouver

Environmental Protection and Preservation Bylaw, (the amendment of a number of bylaws), February 2009. It protects trees within stream corridors, trees on steep slopes 30° or greater, wildlife trees, heritage trees, large mature trees of 0.75 m in diameter or greater and Western Yew trees of 0.25 m in diameter or greater (diameter measured 1 m off the ground). A permit is required to cut or remove a protected tree. A permit is not required for general maintenance and tree pruning done according to the International Society of Arboriculture's standards. Permits will be issued for protected trees on land that is within a building or driveway envelope, but the developer must show the necessity for the removal of such trees. Fines begin at \$250.

Olympia, WA

Tree Protection Ordinance, amended 2001. A tree permit is required for the removal of a tree if the "minimum tree density" as set by local Council is not preserved. The minimum tree density begins at 1 tree for 1,500 sq. ft., to 6 trees for 9,000 sq. ft. For lots above 9,000 sq. ft. 30 trees per acre must be planted. A tree permit must always be acquired for the removal of a landmark (heritage) tree. Existing trees also have a tree replacement equivalency based on the size of the tree – i.e. a tree with a 22" diameter is equivalent to 6 trees. Exceptions to the ordinance include emergencies, hazardous trees, nurseries or tree farms, and undeveloped property (removal of up to 6 trees per acre per year). Fines can be no greater than \$1,000 for the first infraction, no more than \$5,000 for subsequent infractions.

Tree Management Policy Report

Maria Stanborough,
Policy & Planning



City of
Kelowna

Recommendation

THAT Council receive for information this report;

AND THAT Council direct staff to prepare a budget submission for an overall Urban Forestry Strategic Plan for the 2010 budget process.



Origin of this Report

Following 2008 Urban Forestry Supervisor's Report to Council. Staff directed to:

“identify potential policy changes to implement directions reflected in [the Urban Forestry Supervisor's] Report.”

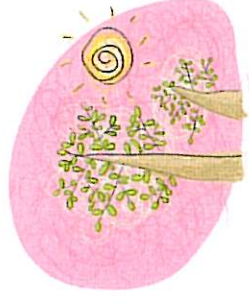


Origin of this Report

2007 Urban Forest Effects (UFORE) analysis of City tree inventory, as well as a Street Tree Resource Analysis (STRATUM).

Current tree canopy for Kelowna is approximately 13%.

Ideal tree canopy suggested to be 25%.



Background Policy

1992 'Significant Tree Inventory' for Inner City Sector - 200 trees, 53 species

1993 'Heritage Tree Inventory' for Rutland Sector - 40 trees, 9 groves, 18 different species.



Background Policy

Currently, the Subdivision, Development and Servicing Bylaw 7900 is under review to address Boulevard Landscaping in the Design Guidelines Section – re: public landscaping.



Background Policy

- Three existing Tree Protection bylaws:
- Tree Protection Bylaw 8041
 - Municipal Properties Tree Bylaw 8042
 - Nuisance Trees and Shrub Bylaw 6469



Public Feedback

Community support for parks & natural spaces very high in Kelowna Community: Future O.K. Initiative (2006) and OCP Review (2008-09).

“Plant more trees” prioritized when survey respondents asked how to address change (January 2009).



Pine Beetle Effects

Anticipated to kill 80% of all Ponderosa pine and other pines planted in the Kelowna area.

Beetle destruction will result in 20% reduction of tree canopy (becomes 10.5%)



Potential Policy Direction

Reviewing tree protection bylaws from other municipalities indicates where Kelowna can extend tree management, if so desired:

- ❑ Protecting mature trees;
- ❑ Protecting certain species of trees;
- ❑ Planning subdivisions to retain as many trees as possible.



Potential Policy Direction

Greenhouse gas emissions targets:

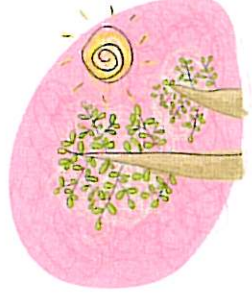
- 30% reduction of 2007 GHG emissions by 2020.
- Current tree canopy sequesters about 7,400 metric tons of carbon per year.
- A mature tree sequesters about 48 lbs/year



Potential Policy Direction

Trees also fit in with many goals of sustainability:

- Shading and cooling of houses & public areas in the summer (environmental)
- Create more livable, attractive communities (social/cultural)
- Extend life of infrastructure (economic)



Potential Policy Direction

Other means to extend tree management include:

- tree planting program,
- public education campaign,
- tree protection guidelines.



Thank you

Questions?

Ian Wilson, Manager Parks Services

Maria Stanborough, Policy & Planning



City of

Kelowna