Ducks Unlimited Canada Practicum
Updating the Local Government Parks & Natural Areas Dataset

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Background

Ducks Unlimited Canada (DUC) is a non-profit organization that is committed to helping conserve, restore, and manage wetlands, grasslands, and associated habitats. DUC believes nature is the foundation of strong communities, a prosperous economy and a sustainable future and they work to uphold their vision of clean water and healthy wetlands for all waterfowl, wildlife, and people.

The LGPNA dataset

The Local Government Parks and Natural Areas (LGPNA) dataset consists of polygons of natural park areas representing local parks from over 85 municipalities and 22 regional districts across British Columbia. This dataset was created by a team from the Nature Trust of BC and published in 2017. It attempts to capture, organize, and make available all those areas of municipal and regional parks that are considered naturally intact. While there is an open version of this dataset, the complete version is restricted to partner organizations, The Nature Trust of BC, the Canadian Wildlife Service, Ducks Unlimited Canada, and the Nature Conservancy of Canada.

Central Park, Burnaby, BC in the Local Government Parks and Natural Areas dataset. Notice the non-natural areas edited out. Depending on specific criteria, polygons in the LGPNA are edited to remove non-natural area.

Why is it important?

Conservation of natural areas in and around populated areas is critical since these areas often experience greater negative impacts due to human development. Biodiversity in these areas tends to be higher and knowing where existing parks are located supports best conservation practices. GIS layers of provincially and federally managed parks and conservation areas already exist and are widely available. However, there was no complete dataset available that contained local and regional park areas at the time this dataset was created. Therefore, the creation of this dataset was needed to complete the spatial representation of all parks and conservation areas across the province.

Deer Lake Park in Burnaby, BC, is a great example of a local government park located in the heart of a major population centre. Deer Lake and its neighbour Burnaby Lake, have significant natural areas which serve as important habitats for wildlife including many species of waterfowl.

The need to update

Not all existing park polygons in the LGPNA dataset need to be updated. However, there are many areas that have been newly designated as parks, many areas that are no longer parks and many areas with natural areas removed. The LGPNA dataset should be updated to reflect all of these changes. Moreover, determinations need to be made about what should be included in the LGPNA dataset, as many park polygons contain beach access areas, athletic areas and trails that are not always relevant to conservation. A more standardized and complete approach to the determination of park class for each area will aid in this effort.
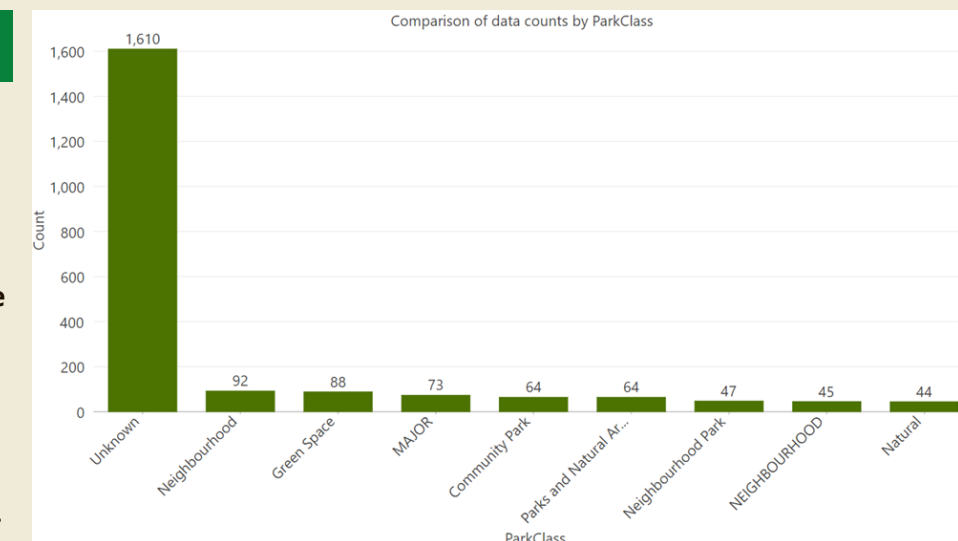
Issues with the LGPNA include attributes that are not standardized and polygons that are not correctly aligned. This chart depicts LGPNA polygon count by park class, 1610 are "Unknown" and others are redundant.

Updating the dataset & final result

Updating the LGPNA dataset involves sourcing data from all municipalities and regional districts that contain relevant park and conservation areas. Work has been started gathering data and verifying park areas through any means possible including the use of static maps, web mapping applications and any open data that may inform park locations. Existing areas in the LGPNA dataset are being checked for alignment with the Parcel Map of BC as well as having park names and park classifications verified against the most up-to-date information.

Crescent Valley Beach Regional Park in the Regional District of Central Kootenay shown here, has been edited to match the Parcel Map of BC boundaries outlined in light blue. This is accomplished in ArcGIS Pro by editing vertices to align with the boundary or by creating new features from the parcels and transferring the LGPNA attributes over.

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BEFORE

AFTER