

NOTE* This document is not meant to be a comprehensive history of the parks but rather, highlights of some of the more relevant information in the context of Park master planning. If you are interested in reading more, many of the documents summarized here can be found at the Provincial Archives.

Odell & Killarney Parks

Consolidation of Research

FREDERICTON GROWTH STRATEGY 2017

Intro

- Projected growth from 60,000 to 92,000 by 2041
- 9 Community Goals
 - Sustainable and Efficient
 - Green and Healthy
 - Welcoming and Supportive
 - Strong and Diverse Economy
 - Culturally Rich and Diverse
 - Vibrant Downtown and Riverfront
 - Complete Neighbourhoods and Distinctive Places
 - Complete Transportation System
 - Safe and Inviting Public Realm
- 8000 population increase in urban core
- Most new jobs will be in construction, tourism and recreation, science and tech, and health

History

- Maliseet First Nation
- On and off French settlement from 1609 to 1755
- 1783 loyalists arrived
- 1785 formation of Fredericton and UNB

Strengths Challenges and Opportunities

- “Odell Park and Killarney Lake Park are magnificent legacies, the value of which will only grow as the city grows.”

Growth Strategy

- Designated growth areas near Killarney Lake Park
- Future growth scenario focused on compact and balanced growth
- “Parks and other public open spaces will be designed for active and/or passive use by people of all ages and abilities in all seasons.”
- Fredericton will be a city where all residents and visitors can feel safe and secure.



- A primary objective of the 25 year growth strategy is to preserve Fredericton's natural features and rural areas.

ODELL PARK - 1968

- Was once set aside for 'higher learning'
- Named for Reverend Jonathan Odell who was the first to settle on the 300 acres and was a founder of UNB (formerly Academy of Liberal Arts and Sciences)
- Farmstead stood in northwest corner - in 1968 included a riding stable, Visitor Centre, and caretaker residence
- Visitor centre was a centennial project and opened in 1967 by the Queen Mother, Queen Elizabeth I
- Estate purchased by the city in 1940
- Some logging was carried out between 1940 and 1950 removing large decaying or windthrown trees
- Became "Odell Park" in 1954. Was Odell Woods prior to this
- "These woods are of special interest to students of nature, as they are a unique sample of the once widespread northern hardwood forest, that at one time stretched unbroken from the Saint John River Valley southwest to the Appalachian Mountains on New England."
- Key are the Large centuries old hemlocks, which don't tolerate disturbance of forest fires or logging
- Only roughly 50 acres in the upper section has ever burned - no hemlock here
- Elevation change of over 300 feet from lowest to highest
- Several small springs but only one major watercourse - Hermitage Creek
- Large collection of erratics that do not match the bedrock - were deposited from elsewhere by glacial forces

ODELL. A PARK FOR ALL SEASONS, 1981 - Henrik Deichmann

- Deichmann graduated from UNB in 1957 with Bsc. in forestry and at time of writing was New Brunswick Director of the Canadian Nature Federation.

Intro

- Odell was to be a place where citizens could come and relax and recreate in a fresh, natural setting
- Development in the park consisted of a 16 km network of trails, stables for riding horses, and a visitor centre.

Rock Talk

- Hermitage Creek referred to now as Phyllis Creek
- Pennsylvanian age gray sandstone

Among The Trees & Understory Plants

- Sugar Maple, Beech, White Birch, Red Spruce, and Balsam Fir are common.
- The Hemlocks indicate a general lack of fire or logging here over that past 300+ years
- Striped and Mountain Maple grow as understory
- Wonky Cedars near the visitor centre grew this was trying to wind around an old iron fence that had been erected by the Odells
- Understory specimens - largely beneath hardwoods (more spring sun!) - include Trout Lily, 2 Trillium varieties, Bellwort, Rose Twisted Stalk, Bunchberry, Goldthread, Wood Sorrel, and Clintonia in spring. Summer includes Goldenrod and Asters. Also Ferns, clubmosses, lichens, liverworts throughout
- Mushrooms a plenty in rotting tree trunks

Animals

- Green Frogs live in the ponds near the picnic area
- Toads everywhere
- Red-Backed Salamander near watercourses
- Wood Turtles - very rare now
- Garter Snakes in and around the old stone wall
- Chickadees, Red-breasted Nuthatch, Brown Creeper, Woodpecker, White-breasted Nuthatch, Raven, Hawk, and Golden-crowned Kinglet are few of the birds that overwinter
- Robins, Thrushes, Flycatchers, Warblers, Northern Oriole, Scarlet Tanager, Rose-breasted Grosbeak, Swallows, Nighthawks appear in spring.
- Raccoons, Red Squirrel, Gray Squirrel, Chipmunks, Deer Mice, Shrews, Weasels, Hares, and very occasionally, Bobcats

A Park for All Seasons

- Ornamental Pheasants used to be kept in pens below the visitor centre.
- Used to be a deer pen

Charts and Tables

- List of trees shrubs and wildflowers and where they might typically be found
- Same thing for birds
- There were still a few elms in the 80s

SOME TYPICAL TREES AND SHRUBS

| SPECIES | HABITAT |
|----------------|---|
| White Pine | Some large specimens near the Center |
| Tamarack/Larch | Along Waggoner's Lane |
| Red Spruce | On higher ground along the east boundary |
| White Spruce | Lower sections |
| Hemlock | Largest ones found in the center & west sect. |
| Balsam Fir | Scattered except in the central area |
| White Cedar | Mainly on the upper slopes |
| Butternut | A rare tree in the Park |
| Yellow Birch | Mixed with other hardwoods, upper slopes |
| White Birch | Mainly in the Northwest corner |
| Speckled Alder | Most wet areas, lower elevations |
| Hazel | Rich dry hardwoods |
| Beech | Common with Yellow Birch, Sugar Maple, upper slopes |
| Elm | Sadly its dying, a few on lower slopes |
| Sugar Maple | With Beech, Yellow Birch on upper slopes |
| Red Maple | Poorly drained areas, west boundary, upper slopes |
| Striped Maple | Under other hardwoods, central |
| Mountain Maple | Similar to Striped Maple |
| Hobblebush | Under Hemlocks and mature hardwoods |
| White Ash | A beautiful specimen stands on the path, uphill from the Center |

SOME TYPICAL WILD FLOWERS AND HERBS

| SPECIES | SEASON | HABITAT |
|---------------------------|--------|---|
| Jack-in-the-Pulpit | S | Wet shady areas of muck soil |
| Clintonia | S | Shade, often under softwoods |
| Trout Lily/Adder's Tongue | S | Shady banks, brook edges, under hardwoods |
| Wild Lily of the Valley | S | Open woods, usually under softwoods |
| Indian Cucumber Root | Su | Shady woods |
| Rose Twisted Stalk | S | Rocky woods |
| Purple Trillium | S | Moist slopes, mixed woods |
| Painted Trillium | S | Rocky slopes, generally under hardwoods |
| Bellwort | S | Under hardwoods |
| Blue Flag | Su | Ditches, seepage areas |
| Spring Beauty | S | Under large hardwoods |
| Columbine | Su | Edges |
| Goldthread | Su | Dry woods |
| Kidney-leaved Buttercup | S | Woods, damp areas |
| Foam Flower | S, Su | Under woods, rich soil |
| Agrimony | S, F | Thickets |
| Wood Sorrel | Su | Under mature woods |
| St. John's Wort | Su | Field edges, waste areas |
| Enchanter's Nightshade | Su | Sunny spots, rock piles |
| Fireweed | Su | Open area |
| Wild Sarsaparilla | Su | Open woods |
| Spikenard | Su | Shady woods, rich soil |
| Bunchberry | Su | Generally under softwoods |
| Starflower | Su | Open woods |
| Selfheal | Su | Unmowed open area |
| Mad-dog Skullcap | Su | Moist meadows, damp wood edges |

SOME TYPICAL WILD FLOWERS AND HERBS (Cont'd)

| SPECIES | SEASON | HABITAT |
|------------------|--------|--|
| Butter & Eggs | Su, F | Unmowed edges |
| Common Speedwell | Su | Dry woods |
| Bedstraw | Su | Edges |
| Indian Tobacco | Su | Edges, banks |
| Yarrow | Su | Dry unmowed fields |
| Boneset | Su | Stream banks, wet thickets |
| Asters | F | Field edges and openings in woods |
| Hawkweeds | Su | Open banks, unmowed areas |
| Goldenrods | Su, F | Some species field edges, other glades |

KEY: S - Spring (up to June 21)
 Su - Summer (June 22 to mid August)
 F - Fall (August 15 and later)

KILLARNEY LAKE PARK PRESENTATION, 2005

- 750 ha was zoned for park purposes in 1979 and the Killarney Lake Advisory Board was established
- Presentation discusses property ownership of all parcels that make up the park and the character of those parcels (ie. Beaver Dam, Boggy, Stream, etc.)
- Conceptual rendering of rotary lodge

THE ODELL ARBORETUM Pamphlet

- Started in 1984/85 to mark bicentennials of New Brunswick and Fredericton
- Arboretum Trail and 'Species Collection'
- Arboretum trail is 2.8k noting trees in their habitat with benches.
- Species Collection includes every species native to New Brunswick in lawn, paths, and benches

NB PROTECTED NATURAL AREAS COALITION LETTER, 2002, Roberta Clowater

- Regarding concern about trees being cut down in Odell
- Reasoning provided by City Forester was for safety and fire control
- Suggests the development of a written conservation plan for Odell
- Would be interested in providing input and feedback for such a plan

DEVELOPMENT PLAN FOR ODELL PARK, 1960, by Odell Park Committee

- Notes the uniqueness of Odell as a primeval forest in New Brunswick because it has never been destroyed by fire or by man
- Plan was always to develop the already developed portion of the park that had formerly been the homestead
- New programming proposed - parking, playground, picnic areas, outdoor skating rink, riding ring for horses, location for the Pony Club
- "This area would be developed in such a way as to gradually blend into the forest area beyond through what is known as a transition zone."
- The forest would be left undisturbed except for existing trails
- Bridle paths could be used for sleigh rides in winter
- Phase 1:
 - Parking Lots 1 and 2
 - Small Play Area
 - Picnic Area #1
 - Trail Improvement
 - Roadways
 - Outdoor Skating Area
 - Tool Shed
 - Public Riding Ring
 - Improve Foot Paths
 - Shrubbery and tree planting
 - 600 ft. water and sewer
- Phase 2 (as required):
 - Erect main gate entrance
 - Extend Picnic areas
 - Erect permanent lavatory
 - Create campfire circle area
 - Improve shrubbery at entrances and around parking lots
 - Provide a suitable building to serve as a centre for park activities
- Notes that the caretaker's house is an obstacle to park planning and should be relocated

THE KILLARNEY LAKE PARK AND RECREATION AREA CONCEPTUAL PLAN - FINAL DRAFT, 1985

Background

- Has been a popular swimming, sunbathing, and fishing resort since the early 70s

- Desire to broaden recreational opportunities in and around the lake
- Park expansion was proposed by Fredericton District Labour Council with interest from Fredericton Field Naturalists' Club, Fredericton Fish and Game Association, Fredericton Kiwanis Club, and City of Fredericton Tree Commission.
- Zoning by-law 450 designated the approximate area of the park for park purposes
- KLAB was responsible for mapping the proposed area, establishing park boundaries, undertaking an environmental study and collecting citizen input which all lead to this report.

Purpose of the Plan

- Park plan does several things:
 - Describes framework of the recreational delivery system within which the park will form a part
 - Identifies the purpose for which the park is being developed
 - Identifies goals and objectives relative to parks development
 - Describes the parks physical resources
 - Proposes how said resources should be used and managed
 - Identifies phasings and priorities relative to capital development
 - Outlines a strategy for developing outdoor recreational activities while minimizing the impact of human presence

Purpose of the Park

- A focus on passive recreation including cross-country skiing, hiking, nature walks, outdoor photography, sightseeing and picnicking.
- Odell and Waterloo Row were the only places for this previously, and Odell was becoming stressed environmentally because of this pressure
- Parks of similar size and function are 30 minutes to 3 hours drive - Mount Carleton, Fundy National, and Mactaquac
- Intended to add diversity of recreational opportunities available within the city

Park Setting

- Park boundaries were identified on the basis of watersheds, physical landforms, property lines, and desirable access points.
- Park boundaries include Beaverdam Brook, McConaghy Brook (with associated beaver ponds), 300 acre city rifle range

Physiography and Resource Analysis

- Region is within the Gulf of St. Lawrence Plain (also called the New Brunswick Lowlands)

- Geologically dominated by sandstone, shale, and conglomerate.
- Principal overburden is glacial till with pockets of gravel along stream beds and banks.
- 3 Brooks: Killarney Brook, Beaverdam Brook, McConaghy Brook.
- Several Eskers (Ridges of stratified sand and gravel created by glacial retreat - rare in the Fredericton area)
- Makes note of hills being steep enough for downhill skiing or tobogganing
- Wide range of habitat for wildlife with Beaver being prevalent with as many as 12 dams
- Additional wildlife include deer, moose, raccoon, porcupine, and ~150 bird species
- Forest cover is largely immature due to extensive selective logging activity
- An older forest stand exists north of McConaghy Brook.

Development Framework

Plan Goals

1. Broaden the extent of outdoor recreation opportunities available on Fredericton's north side
2. Diversify the extent of recreation opportunities available to the people of Fredericton, both family oriented and for others with special recreation pursuits.
3. Provide a diversity of outdoor family oriented recreation experiences in association with a natural environment park within a city
4. Protect and enhance where possible, the cultural and natural environment of the Killarney Lake Area
5. Further strengthen Fredericton as a tourist attraction by expanding the array of recreation facilities available to tourists

Development Objectives

1. Protect the Killarney Lake Watershed and prevent development from occurring which might reduce the Lake's water quality.
2. Provide within the park suitable day use and longer term recreation opportunities in areas of outstanding potential
3. Provide outdoor recreation opportunities ranging from high intensity day use to low intensity back-country experiences, both passive and active
4. Provide opportunities for the exploration and appreciation of the natural and cultural environments within the park via interpretive and other educational approaches
5. To safeguard, manage and improve upon the abundant variety of physical and environmental resources found within the park, particularly with respect to wildlife forest cover and water bodies
6. Ensure the infrastructure is provided for playground, lodge, trail development

Overall development context

- Long term project
- Important that Killarney be appropriately integrated with development expansion of Devon and Marysville
- Was considered more simple to purchase properties outright than try to purchase logging rights to properties.

Killarney Lake's Watershed

- Lake water quality is dependant on surface run-off
- Maintaining high water quality is integral to maintaining the lake as recreational resource
- Must maintain lake water level
- Little known at this time about Lake's groundwater recharge area
- Divert run-off from west of the lake to preserve water quality.

Hunting

- Most hunting carried out by St. Mary's Band - includes mostly deer, moose, and some partridge
- Potential conflict between hunting and park use if park is to cross St. Mary's band land

Development Policies and Proposals

Access

- Most access will be by car
- Entrance from Devon and Marysville possible by foot if all goes to plan
- One main entrance proposed at Killarney Lake
- Two additional major entrances proposed in Marysville and Devon
- Full development will result in increased parking requirement
- Large parking lots in any one area should be avoided
- Keep park open during daylight hours
- Reduce speed limit along park edge from 80 to 60
- Lock gates after daylight hours
- Screen parking lots from activity areas with trees and shrubs

Interior Circulation Network

- For hiking, jogging, snow-shoeing, cross-country skiing, bicycling, and orienteering
- Provide for 'linear' types of recreation with a two-tiered circulation system
- Primary Trail

- Primary trail for year-round standards accommodating bicycles, walking, and x-country ski + park maintenance vehicles - 10-12 feet width surfaced with mine tailings or crusher dust and no steep inclines
 - Many already in place as woods roads
 - Drainage improvements required and several small bridges required
- Secondary Trail
 - Hiking and nature trails for viewing wildlife
 - Access to areas of special interpretive value and to more environmentally sensitive areas
 - Allow hikers to traverse the entirety of the park without having to use the primary network
 - One trail around the perimeter of Killarney lake connecting to Beaverdam Brook (BDB) nature trail
 - BDB trail would link up to McConaghy Brook (MCB) trail
 - Trail around the perimeter of MCB pond
 - Narrow trail not accessible to vehicles
 - Use wood chips or wood shavings
 - Placement of boardwalks (4-5 feet wide) in wet areas to minimize disturbance
- All trails clearly marked as to their intended use and purpose as well as to provide wayfinding
- Maps at major intersections
- Create a pedestrian bikeway through the park connecting Devon, Marysville, and Killarney Lake
- Propose separated bikeway along Killarney Road to Maple Street
- Pedestrian bikeways should avoid steep inclines
- Pedestrian Bikeways should include rest areas
- Add a bike concession - for rentals?
- Plant wildflowers along bikeway
- Course of streams should never be altered for bridge construction / crossing
- Use aggregate from existing quarries within the park to provide construction material
- Prohibit motorized vehicles within the park except for maintenance
- Provide emergency phones in the interior

Landscaping

- Enhance visual appearance of picnicking zone behind the beach
- Earth berms with shrubs to divide parking from beach area
- Parking spaces should be marked
- Establish observation and lookout points with plaques for interpretation
- Develop a detailed landscape plan
- Use stone, logs, and cedar shingles for buildings and structures - non combustible materials
- Signs for directional purposes - numbers kept to a minimum required for directional purposes - indicate distances on signs where applicable
- Buffer the beach from Killarney Road
- Avoid fertilizers near the lake

- Materials should convey a sense of quality
- Treated wood stairways up the sides of several eskers as part of the nature trail
- Secure picnic tables to the ground
- Use materials that require minimal upkeep
- Potentially develop a playground at Marysville entrance
- Do not encourage fires or bbqs in wooded areas
- Proposed canoe or boat rental at the lake

Picnicking

- Sites behind the beach, in the tamarack stand south of proposed lodge site, southwest end of the lake near proposed footbridge, and in the area where the park extends towards Marysville
- Only locate around exterior of park
- Could consider primitive tent campground sites in the interior

Park Buildings

- Proposal to establish park lodge as centre of park operations
- Potential establishment of a smaller lodge in Marysville
- Proposed maintenance compound in the vicinity of the water tower at the south part of the park
- Proposed caretaker staff living on site at the park
 - Such arrangements exist at Wilmot and Odell
 - Set away from public areas but with view of lodge and lake
- Should be accessible

Nature Interpretation

- One of the single most important types of recreation to be developed
 - Viewing scenic areas
 - Studying plant and animal life
 - Bird watching
 - Observing beavers at work
 - Exploring land forms
- Areas with special interpretive value:
 - Killarney Lake
 - Eskers to the northeast of the lake
 - Large stream valley
 - Beaver ponds and dams
 - Vegetation
 - Summit of large hill
 - Mature forest
 - Scenic outlooks
- Involve local naturalists club if possible
- Students in forestry or natural sciences could help with studies
- Develop an interpretive education program

- City should maintain ongoing identification and protection of additional points of interest

Wildlife Management

- Deer, Beaver, Moose, and Fox to name a few
- Minimize any disturbances to the wildlife population
- Proposed uses for sensitive areas of Beaverdam Brook and McConaghy Brook:
 - Hiking
 - Nature observation
 - Photography
- Boardwalks are strongly advised through wet terrain
- Consider improving some of the abandoned beaver ponds for duck and goose habitat (maybe not a good idea now - better to let natural processes to continue unabated)
- Do not destroy any of the beaver ponds or dams
- Potential structural reinforcement of beaver dams
- Maybe undertake a beaver management plan as food sources are becoming scarce
- Trout fishing is popular in the lake
 - Dept of natural resources stocks the lake
 - Potentially stock the lake for winter ice fishing away from skating areas
- Hunting and trapping should not be permitted unless deemed necessary for management with the exception of St. Marys Land
- Keep the lake free from goldfish and other unwanted fish
- Prohibit live fish bait
- Consider designation as a game reserve

Trees

- Mixed Acadian Forest
- Birch, Maple, Poplar mainly with Spruce, Fir, Hemlock, and Pine
- Mostly classed as immature
- An example of natural reforestation
- Fir trees have suffered from Spruce Budworm
- Potential for educational woodlot management projects
- Let the woodland evolve naturally
- Discourage heavy logging equipment
- Discourage chemical spraying for insect control purposes

Activity Areas

- Killarney Lake and Beach / picnic area
- Beaverdam Brook and valley
- McConaghy Brook
- Clark Street Rifle Range
- Marysville Quarry

Killarney Lake

- Major visitor centre and main entrance
- Variety of uses
- Summer and winter rec
- Facilities proposed
 - Lodge
 - Playground
 - Beach and swimming
 - Hiking and cycling
 - Picnic
 - Boats
 - Parking

Beaverdam Brook and Valley

- Northeast of lake
- Locale for interpretive program
 - X-country ski
 - Orienteering
 - Hiking
 - Photography
 - Snowshoeing
 - Cycling
 - Wildlife observation
 - Timber management demonstration site
 - Lookout points
- Trails should offer varying degrees of difficulty
- Bicycle paths should follow the main logging roads
- Environmental stability must not be jeopardized

McConaghy Brook

- Wildlife, mature forest, beaver ponds, and plant life
- Facilities proposed
 - Hiking and cycling
 - X-country skiing
 - Orienteering
 - Sightseeing
 - Wildlife habitat observation
 - Snowshoeing
 - Nature interpretation
- Placement of major infrastructure not recommended
- Shelter overlooking the beaver pond
- Series of nature trails
- Nature interpretation facilities

Rifle Range

- Key link to Devon / Clark Street
- Proposed facilities
 - Orienteering
 - X-country skiing
 - Snowshoeing
 - Hiking
 - Sleigh riding
 - Cycling

Marysville

- North of Hollybrook Street
- Encompasses large abandoned quarry
- Contrast with natural - ridges, earth mounds, steep slopes, low areas
- Emphasis on active recreation
- Proposed facilities
 - Toboggan runs
 - Areas for coasting (?)
 - Flower gardens
 - Skating ponds
 - Picnic areas
 - Cycling
 - X-country skiing
 - Playground equipment
- Considerable planting and landscaping required

Administration

Implementation

- Responsibility of city of Fredericton and the City's Recreation department
- Construction should be done through tender process
- Use expertise of local service clubs and voluntary organizations
- Prepare detailed construction and landscaping plans for trail and pedestrian bikeway network
- Prepare nature interpretation program
- Prepare directional and informational sign package
- Prepare management plans for environment, wildlife, forest fire protection, etc.
- Ensure staff is provided for operation of the park
- "Quality of development should be nothing less than first rate."
- Administration is joint responsibility of Recreation Department and Parks and Trees Department

Staffing

- Permanent staff required at all times
- Seasonal employees essential for:
 - Lifeguard
 - Nature walks
 - Park lodge
 - Trail construction
 - General maintenance

Utilities and Services

- Garbage cans located at picnic sites
- Ideally sewage disposal would be through a treatment plant on site

Land Assembly

- City own's ¼ of the land desired for the park
- 15 to 20 different owners of remaining parcels
- Try to develop Marysville side in conjunction with Lake side to more quickly provide facilities for marysville
- If leases necessary, they should be long term

Phasing

- Phase 1 - Killarney Lake and Beaverbrook Dam
- Phase 2 - Marysville and Rifle Range
- Phase 3 - McConaghy Brook

St. Mary's Reserve

- Proposed park encompasses ⅓ of the reserve
- Population of about 500 at the time
- Woodlands used for hunting trapping fishing and logging
- Not subject to city by-laws

General Development Policies

- Gravel or aggregate extraction should not be permitted
- Develop program of emergency public assistance
- Monitor use after each phase to determine future demand
- Conduct surveys to ascertain user satisfaction
- Periodic environmental monitoring
- Allow horse-back riding on service and fire roads
- Bicycle patrols
- Periodic police patrols
- Discourage snowmobiles
- Adjacent developments should not negatively affect the park borders

GENERAL BACKGROUND INFORMATION FOR THE PROPOSED KILLARNEY LAKE PARK, 1984

Background

- Municipal Plan 1977 adopted the goal,
 - “It will be the intent of the City to ensure the provision of a large passive park (similar to Odell Park) on the north side of the St. John River encompassing Killarney Lake, the rifle range and stream valley slopes connecting the two.”
- Killarney Lake Advisory Board bylaw adopted 1981
- Three primary criteria established:
 - Protect the Killarney Lake watershed area
 - Link the park with the rifle range
 - Link the park with Marysville
- Detailed resource analysis conducted in 1982
- Naturalist field inspections in 1983
- Background info was made available to St. Mary’s Band Council, Fredericton Tree Commission, North Side Rotary Club, and Fredericton Orienteering Club

Soils

- Soils are mostly King’s Loam - characterized as moist, acidic
- Rock fragments and boulders are mixed in
- Spruce, Fir, Cedar, Birch, Alders, Willow, and Poplar thrive
- Soil depth is mostly unrestricted

Topography

- Elevations vary from 50m to 137m above sea level
- Gentle hills, small ravines, steep ridges, flat areas, marshes, and water bodies
- Several eskers in the north-west
 - Esker along the edge of Killarney Lake is several hundred feet long and more than 50 feet high
- Esker is a natural dam in Beaverdam Brook. Brook source originates just east of the lake.
- Highest point is north east of the lake
- South-west quadrant of park is toughest terrain - lots of boulders, marshes, peat bogs, and abrupt slope changes.

Surface Water Drainage

- ~75% of park drains into Nashwaak River
- ~25% Drains into Nashwaaksis Stream and St. John River

- Beaverdam Brook
- McConaghy Brook
- Kaine Creek
- Grieves Creek
- Several Marsh Areas

Surficial Geology

- Area is characterized by Pennsylvanian Sandstone, conglomerate, siltstone, shale, and limestone with some associated volcanic rock
- Overburden is primarily ground moraine till

Aggregate Mining

- Two sand and gravel pits were still in operation at time of writing (1984) just outside of proposed park boundaries
- Killarney road quarry produces mostly sand with some gravel (75% of the quarry has been depleted.)
- Marysville quarry mostly clay and sand with some gravel.
- Suggested potential uses for quarries:
 - Motocross
 - Bicycling
 - Dirt bike riding
 - Snowmobiling
 - Tobogganing
 - X-country skiing
 - Hiking
 - Parking
- Marysville quarry connects to an existing woods road

Killarney Lake

- Centre of attraction in the region
- Formed as result of a glacial deposit blocking a small brook during the ice age retreat
- Mesotrophic Lake - characterized by having both shallow and deep areas and therefore differences in temperature - stratification
- Due to temperature and depth differences, some parts are productive and some are not
- Shoreline vegetation is abundant
- Approx. 9.3 ha in size
- 53% of lake is less than 3 metres deep
- Depths at far end from beach are about 10.5 metres deep
- Killarney Brook is the only outlet
- Lake has been used for recreation since Barker House Hotel operated a guest house here - but went mostly unused for decades after it ceased operation

- In the 1970s Fredericton and District Labour Council with Kiwanis Club revived the lake and beach.
- This was followed by work by Fredericton Recreation Department adding Toilets, changing rooms, playground equipment and parking lot improvements
- User statistics through the 70s
 - 1976 - 9700 people
 - 1977 - 16418 people
 - 1978 - 28009 people
 - 1980 - 28000 people
 - 1981 - 28239 people
- Stocked with fish annually since 1958
 - 1000 to 1500 brook trout placed every spring
 - 1600 - 2000 brook trout placed every fall
- 1974 - Department of Natural Resources spent \$22,000 in a goldfish removal program
- Desire to see winter ice fishing allowed
- 1974 report considered using the lake as a water supply for the city

Forest Resources

- Mostly second, third, and fourth generation growth due to logging history

Spruce Budworm Spray Program

- Provincial spraying program
- Earliest programs go back to 1958
- 1976 spraying was most recent prior to 1984

Wildlife

- Small Mammals
 - Fox
 - Raccoon
 - Rabbit
 - Porcupine
 - Beaver
 - Squirrel
- Large mammals
 - Deer
 - Moose
 - Bear
- Beaver have been present in McConaghy Brook area for many years
- Food supply for beavers may run out and there is nowhere further upstream for them to retreat to
- Consider providing food supply for these beavers
- As many as 150 bird species

Findings of Naturalist Committee

- 1983 volunteer assessment
- Defined valuable ecosystems
 - Killarney Lake and its adjacents Eskers and Valley
 - McConaghy Brook, beaver ponds and associate swamp
 - Mature forest stand north west of McConaghy Brook
- “The eskers have been identified as top priority areas because they entail a natural phenomenon with unusual interpretive potential. Together with adjacent land the eskers provide an interesting ingredient of wet and dry habitat in addition to a diversity of plants and animals. While no rare or endangered species were found there, plants of special interest, such as orchids, occur. The eskers are also of considerable geomorphological interest.”
- “The Beaver pond, together with associated habitats, is of prime interest for nature interpretation. These wet lands contain assemblages of plant and animal life not found elsewhere in the region. The opportunity to provide this type of area for nature interpretation in a park within the city should not be lost. Should these wet lands be reserved as a natural feature, future development might provide for carefully selected trails and boardwalks so that numbers of people, for example, school children, could visit the area without degrading its natural features.”
- “Another section of special natural interest is the mature hardwood - softwood stand in the north central portion of the proposed park area. This large, well stratified, contiguous tract of forest also has considerable interpretive value.”
- Suggestions from the committee
 - Trails linking the 3 zones would be advantageous
 - Undesirable activities would include:
 - Hunting and trapping
 - Motorized vehicles
 - Commercial mining and forestry
 - Pesticides and herbicides
- Killarney lake has a delicately balanced ecosystem
- Water level and quality monitoring should be carried out regularly
- Heavy pedestrian use should be directed back away from the lake

Housing

- No buildings or dwellings proposed in the park area
- Residences on west side of Killarney Lake Road currently use septic tanks for sewage disposal.
 - If this is allowed to proliferate, groundwater source of the lake may become contaminated
- Any development that causes a reduction in the water level of the lake could result in higher bacteria counts
- Any housing developments near the lake should only be allowed subject to a guarantee they will not affect the water levels, groundwater, or water quality

- Any large residential development within the watershed will result in alterations to storm water run-off and surface flow.

Recreation Capability

- “The measurement of the suitability of an area to support various forms of outdoor recreation”
- Measurement criteria:
 - Access
 - Presence of water
 - Special physical features
 - Active recreation capability
 - Passive recreation capability
 - General activities
- The area immediately surround the lake has highest recreation capability
- Area with good capability is the area north of the lake and a small sliver of land immediately south of the lake
- Locations with moderate recreation capability included the general area around the lake, the majoy valley northwest of the lake, the general area of McConaghy Brook, the land just north of the sand quarry, , and the abandoned gravel quarry near Marysville.
- At least 55% of the park was rated as having low recreation capability



Development Constraints

- The occurrence of logging may hinder the development of the park in the manner sought
- (much logging was carried out before the park lands could all be purchased based on perusal of google earth historic maps)
- Potential Ring Road extension to Marysville (this did not occur)
- Potential Marysville Road Bypass (also did not fully occur)
- Sand and gravel extraction are a minor constraint
- Acquiring land from private property owners
- Financial commitment from the City

Public Input

- Background information was presented to interest groups
 - St. Mary's Indian Band Council
 - Fredericton Tree Commission
 - North Side Rotary Club
 - Naturalist Club
 - Orienteering Club
 - Nashwaaksis Recreation Council
 - Wostawea Ski Club
- Major concerns of St. Mary's Band Council
 - Need for woodlot or forest management
 - Interest in establishing an Indian Craft Centre
 - Support the project but want to ensure that the Reserve maintains all rights and privileges of their lands
- Major Concerns of North Side Rotary Club
 - Generally were in support
- Major Concerns of Fredericton Tree Commission
 - Supportive
 - Offered services regarding forest management
- Major Concerns of Fredericton Naturalists Club
 - Fully supportive
 - Prefer to only see activities that are compatible with natural environment
- Major concerns of Orienteering Club
 - Strongly supportive
 - Wants and extensive portion set aside for orienteering
 - Offered to assist in identifying suitable areas
 - Wanted to obtain funding to develop orienteering maps
 - Expressed interest in expanding the northern boundaries
 - Saw need for a park lodge with showers and change rooms
 - Generally do not use clear cut areas
- Major concerns of Wostawea ski club
 - Fully supportive
 - Would help identify areas suitable for x-country skiing

- Wants to establish their headquarters at Killarney Lake Park
- There is a need for ski areas near the city.
- Want at least 15km of trails
- Major concerns of Nashwaaksis Recreation Council
 - Supportive
 - Phase 1 alone could provide enough land for a major park

DELINEATION AND ASSESSMENT OF VERNAL POOLS IN
ODELL PARK, 2016 - Christina Davis, Maggie
Brewer, Brittany Hartery, Carolyn Chee from
Faculty of Forestry and Environmental
Management at UNB