

6.0 OBJECTIVES AND RECOMMENDATIONS

The following recommendations are put forward as means to achieve the conservation and recreation objectives of the conservation area, and respond to specific issues identified in Part I of the Management Plan. Phasing and implementation of major actions and recommendations is presented in Section 9.0

6.1 Terrain

Objective:

To minimize public safety issues associated with steep and hazardous terrain, particularly on the northern slope of the mountain.

Actions:

1. Erect signs alerting visitors to potential hazards similar to other City of Burnaby parks.
2. Maintain restrictive barriers along steep slopes, e.g., fences or railings in the Centennial Pavilion area.
3. Erect signs and restrictive barriers along proposed lower loop trail to discourage hikers from scaling up ravines.
4. Close trails on very steep slopes with loose soils (e.g., Trail 'S').
5. Implement the recommendations of the City of Burnaby's Risk Assessment Process for Burnaby Mountain Conservation Area (currently in draft form).

Objective:

To minimize and mitigate problems of erosion and slope instability caused by natural geologic factors as well as those associated with human use.

Actions:

1. Design trails with appropriate surfacing and drainage measures and conduct regular maintenance according to recommendations described in Appendix K.
2. Close trails on very steep slopes with loose soils (e.g., Trail 'S').
3. Erect signage or physical barriers to discouraging visitors from traveling off formal trails.
4. Minimize disturbance to slopes during construction and maintenance activities through use of proper equipment and trained staff. Where vegetation has been removed, ensure these areas are revegetated or stabilized immediately following the work.
5. Conduct geotechnical assessments of any developments, excavations or land clearing proposed for the north slope.
6. Monitor changes to water levels or flow patterns of streams which, if altered, could lead to erosion.
7. Consider the use of check dams or other methods to minimize flashy or erosive stream behaviour on steeper slopes subject to MELP and DFO approval.
8. Promote the use of biotechnologies in preserving the integrity of potentially unstable slopes (e.g., live bundles or wattles) instead of

traditionally engineered structures (e.g., concrete retaining walls). The use of naturally regenerating materials also promotes the creation of habitat.

6.2 Vegetation

Objective:

To actively manage vegetation communities to maintain habitat diversity and forest health.

Actions:

1. Develop a comprehensive Vegetation Management Plan that identifies specific management strategies and considers:
 - thinning of some alder stands to allow regeneration of light-tolerant deciduous species
 - planting of conifers under some alder-maple stands
 - monitoring areas of declining mature deciduous forest and regenerating coniferous stands
 - planting of preferred browse species for deer away from roadways while assessing the implication of this on other species
 - obtaining a greater diversity of habitats by planting and encouraging a mix of species in accordance to principles and guidelines set out in the Provincial Biodiversity Guidebook
 - removal of diseased or damaged trees that pose a threat to public safety or forest health
 - retention of dead trees and snags that do not pose a threat to public safety or forest health
 - feasibility of clearing introduced blackberry and other dense shrubs from underbrush to open up some areas for ground foragers and replacing with native herbaceous plants and grasses to reduce likely blackberry recolonization
 - assessing the effects of pesticide and herbicide use on rights-of-ways and recommending alternatives to control pests and invasive vegetation
 - assessing the risks and implications of forest fires, disease and infestations on forest health and public perceptions.
2. Consider undertaking enrichment plantings to create a more diverse and aesthetically pleasing forest. In particular, areas of continuous red alder stands could be enhanced by planting shade tolerant conifers (hemlock, cedar or grand fir), or low level trees such as dogwood or cherry.
3. Encourage utility companies to develop vegetation Management Plans and Integrated Pest Management Plans compatible with the conservation area environment.

Objective:

To reduce damage, destruction and loss of vegetation and habitat through trail design, education, and enforcement.

Actions:

1. Minimize the removal of vegetation except where specific management objectives have been clearly identified, e.g., habitat enhancement or view management.
2. Keep formalized trails in good drainage condition to discourage off-trail hiking or riding to avoid wet areas.
3. Close all trails not formalized within the plan and enforce closures through the use of signage, natural barriers, on-site enforcement, and fences or structural barriers if necessary.
4. Institute a program of appropriate and sensitive site rehabilitation of those areas of the conservation area where off-trail use is prevalent.
5. Ensure trails allocated for multiple-users are of sufficient width and standard to accommodate all designated users wherever feasible.
6. Provide adequate directional signage and maps. Use signage to discourage the removal of vegetation (e.g., flowers) and off-trail hiking or riding which can trample vegetation.
7. Enforce buffers and leave-areas around streams.

Objective:

To monitor the presence and location of plants of special interest, and to protect rare, endangered or sensitive terrestrial or aquatic plant communities or species.

Actions:

1. Maintain a database of Provincially Listed plants in the vicinity of Burnaby Mountain Conservation Area through regular communication with the Conservation Data Centre.
2. Encourage local naturalists to report sightings of any rare, endangered or unusual plant species to the Parks and Recreation Department.
3. Conduct more detailed environmental evaluations of new activities or facilities proposed in areas that may potentially support rare or unusual plant species.
4. Monitor the locations and extent of invasive exotic species.
5. Prevent, where possible, the establishment of non-native species through public education programs.

Objective:

To conduct conservation area management, maintenance and planting activities to preserve and enhance the natural forest character of the conservation area.

Actions:

1. Manage vegetation around important scenic views according to guidelines identified in the conservation area's Vegetation Management Plan.
2. Conduct site evaluations of areas proposed for trail development or re-routing to identify any significant trees for preservation (e.g., wildlife trees or specimen trees) or potential hazard trees.
3. Conduct re-planting or restoration activities to promote habitat diversity by planting native deciduous and coniferous trees, shrubs and ground cover.

4. Conduct landscaping of open spaces in a way which minimizes the need for soil additives (i.e., fertilizers or pesticides), for example, monitor for early signs of exotic species; prevent cleared areas from recolonizing with invasive species such as blackberry.
5. Plant only native species in areas where vegetation is to be restored (e.g., trail closures or rehabilitation areas) to reduce the impacts of exotic and invasive foreign species. (See MELP 1996b: Recommended Native Tree and Shrub Species for Restoration and Enhancement of Fish and Wildlife Habitat).
6. Use appropriate ground cover and soil retention mechanisms during construction or maintenance activities to control soil runoff.

Objective:

To prevent or quickly control fire, disease or insect outbreaks within the conservation area.

Actions:

1. Work with SFU and the local fire department to prepare a Fire Management Plan that will protect people and facilities through fire suppression measures.
2. Identify a network of trails that can function as service roads to access potential fire scenes.
3. Consider the location and expansion of a waterline and hydrant system to service the conservation area.
4. Participate with the Ministry of Forests, Canadian Forestry Service, or academic institutions in developing and monitoring forest health indicators, e.g., outbreaks of insects or pathogenic diseases in the conservation area.

6.3 Wildlife and Habitat

Objective:

To prevent the loss or degradation of important wildlife habitat within the conservation area.

Actions:

1. Encourage the use of existing clearings and previously disturbed areas for recreation and facility development.
2. Restore degraded habitats, such as informal trails, through restricting access, re-vegetation, and drainage control.
3. Enforce trail closures and discourage off-trail hiking and riding through design measures such as barriers, signage, landscaping, and education.
4. Maintain all trails and facilities at a standard that minimizes or eliminates impacts upon other habitats, i.e., sedimentation of downslope aquatic systems.
5. Where the development of new facilities is required, off-set the loss of habitat through the preservation and enhancement of other areas for wildlife.

6. Work with utility operators and neighbouring landowners to maintain deer forage habitat on rights-of-ways and adjacent properties.

Objective:

To minimize the impact of new developments or activities on wildlife habitat.

Actions:

1. Restrict new developments within the conservation area to those identified as appropriate according to the Covenant establishing Burnaby Mountain Conservation Area and according to this Management Plan.
2. All proposed new developments which have the potential to affect undisturbed areas of the conservation area should meet the City's ESA planning and design principles and be subject to an assessment of environmental impacts. The evaluation should identify the presence and location of wildlife species and habitats, and describe the type and significance of impacts expected from the proposed project.
3. Minimize clearing of vegetation and alteration of natural topography during construction or maintenance of facilities. Plant native vegetation as needed to enhance or restore wildlife habitat after such activities have occurred.
4. Require major development projects to have an environmental monitor on-site at key periods. The monitor must be aware of all habitat issues and goals and have the power to stop work if contractor tasks are being carried out to the detriment of habitat values.
5. Conduct development and maintenance activities during "safe work windows" based on the potential of the activity to disturb wildlife species. For example, works around streams should be conducted during in-stream allowable work periods as established by DFO; any off-trail work should be conducted before or after spring nesting season for ground nesters (generally early May to late June: RIC Guidelines).
6. Maintain a working relationship with SFU to minimize facility duplication, i.e., roads, trails and parking to prevent the resultant elimination of habitat.

Objective:

To protect large, unfragmented areas as "habitat blocks" and provide linkages between habitats for wildlife.

Actions:

1. Limit or restrict development within large, sensitive, or significant habitat blocks.
2. Retain or establish wildlife corridors of sufficient width and dimension to provide for safe and effective migration between major block of habitat.
3. Where feasible, provide opportunities for passage under or across roads to maintain the integrity of wildlife corridors within the conservation area and between regional greenspaces, e.g., identify an appropriate location and design for a wildlife crossing across the Barnet Highway.
4. Avoid the construction of fencing that may interfere with identified wildlife migration corridors.

5. In cooperation with academic institutions and neighbouring land owners, conduct studies of wildlife species movement patterns to better understand corridor requirements and habitat preferences.

Objective:

To provide a high level of habitat diversity within the conservation area.

Actions:

1. Review and refer to the Biodiversity Guidelines developed for the Forest Practices Code of B.C. to assist in identifying enhancement measures appropriate to the habitat types of Burnaby Mountain.
2. Consider planting or encouraging a different mix of species (see recommendations for a Vegetation Management Plan).
3. Work with surrounding land users (i.e., SFU, industry) to ensure that habitats provided by these adjacent lands are accessible to wildlife.
4. Maintain existing clearings as forage areas and edge habitat.
5. Maintain habitat "blocks" to provide interior forest habitat.
6. Leave large felled trees where they fall as habitat for small mammals and amphibians, and food and forage sites for others such as woodpeckers.
7. Promote the maintenance of dead and decaying standing trees for use by cavity nesters, insects, and as perching/hunting sites for birds of prey except in situations where there is a threat to the safety of visitors or facilities.
8. Plant selected native shrubs and trees along some of the edge habitats to provide food for birds and help discourage alder re-growth.
9. Maintain and restore watercourses and surrounding riparian vegetation (see Section 6.4).

Objective:

To increase knowledge and understanding of wildlife species and their habitats in and around the conservation area, including provincially-listed species suspected to occur within or near the conservation area.

Actions:

1. Design and implement spring and fall bird surveys to document numbers and species of birds using the mountain for seasonal migration.
2. Using data compiled for the Management Plan as a baseline, establish a database of resident birds and their breeding requirements.
3. Design and implement seasonal surveys to document wildlife species present on Burnaby Mountain, and if desirable, conduct species-specific surveys for wildlife of particular interest, e.g., black-tailed deer.
4. Encourage scientific research projects in the conservation area, particularly those with direct management benefits.
5. Develop common objectives with government agencies and non-government organizations, and share information that will facilitate better understanding of wildlife species.
6. Maintain a database of provincially-listed species in the vicinity of Burnaby Mountain Conservation Area through regular communication

with the Conservation Data Centre. Consider developing Habitat Suitability Maps for each listed species.

7. Encourage local naturalists to report sightings of any rare, endangered or unusual species to the City of Burnaby.
8. For species for which baseline data is more complete, consider conducting long-term monitoring of populations to assess changes and track impacts.

Objective:

To maintain or enhance the deer population in the conservation area.

Actions:

1. Design and implement a structured inventory of deer numbers and habitat use.
2. Encourage users of the conservation area and industrial neighbours to report deer sightings to the City of Burnaby.
3. Continue to enforce the 30km / hr speed limit along Centennial Way.
4. Continue to work with the Ministry of Environment, Lands and Parks and the Ministry of Transportation and Highways to develop and implement experimental measures to reduce deer-vehicle collisions.
5. Develop a vegetation and habitat enhancement program to favour preferred deer habitat. The program should consider:
 - removal of desirable browse species along road ways (i.e., clover, pea, brohm grass) in favour of less desirable species (e.g., needle grass and crested wheatgrass) to discourage deer from using these areas for feeding
 - creation of browse areas away from road ways (i.e., about 100 to 250 metres) through small-scale removal of some mature alder-maple vegetation to promote regrowth of early and mixed seral stage vegetation
 - promotion of browse species on rights-of-way
 - promotion of browse species in manicured areas such as viewpoints or the former target range sites
 - protection and retention of known deer movement corridors to ensure deer can travel safely to browse areas
 - monitoring of deer use of sites where such measures have been undertaken (This could be undertaken by graduate students).

Objective:

To protect wildlife habitat from the effects of human disturbance.

Actions:

1. Do not advertise nest locations to conservation area visitors.
2. Install wildlife-proof lids on garbage cans to keep crows away (an overabundance of crows may create competition problems).
3. Enforce pet leash regulations and educate dog owners about the impacts of dogs on birds and other wildlife.
4. Educate the public about the direct and indirect effects of their activities on wildlife.

6.4 Watercourses

Objective:

To protect watercourses from the effects of recreational use.

Actions:

1. Prohibit trails or other facilities within a minimum 15 metre buffer around watercourses or significant drainage areas unless an adequate crossing is in place. This buffer area may be increased in specific areas where special protection may be required. Trail or other proposals around watercourses will require approval by DFO and MELP
2. Divert trails and human use away from watercourses wherever feasible.
3. Implement trail designs which retain natural flow patterns and which reduce erosion, sedimentation, and destruction of aquatic vegetation.
4. Trails should only cross watercourses on bridges or on an alignment perpendicular to the creek.
5. Construct only open-span bridges over watercourses and major ravines with porous (i.e., gravel surface) bridge approaches.
6. Retain and/or restore vegetation on either side of ravines and watercourses to provide soil stability and habitat, and for aesthetic reasons (See DFO's Guide to Riparian Revegetation).
7. Employ measures to ensure sediment-laden waters do not enter watercourses during construction or trail works.

Objective:

To enhance aquatic habitat within the conservation area.

Actions:

1. Encourage, support and participate in programs to improve the physical habitat in and near watercourses that are found to have the most potential to support fish (i.e., Stoney Creek and Simon Creek).
2. In cooperation with local streamkeepers organizations and environmental advocacy groups, complete detailed inventory and mapping of fish species and aquatic habitat.
3. Continue working with community groups concerning the downstream protection and enhancement of watercourses with headwaters in the conservation area.
4. Provide names to all creeks on brochures and possibly by signage to enhance user awareness of the watersheds and their sensitivities.

Objective:

To protect watercourses from the effects of urban land uses.

Actions:

1. Design and implement a program to monitor water quality and quantity within the conservation area's watercourses and to assess changes that may be attributed to growth and development at SFU.
2. Ensure SFU enforces the principles, standards and recommendations outlined in its future Stormwater Management Plan (to be developed prior to proposed development) as well as those outlined in the integrated

stormwater management strategy for the Stoney Creek Watershed (developed by the Brunette Basin Task Group).

3. Work with regional authorities and interest groups to ensure that management of watercourses in Burnaby Mountain Conservation Area reflects the spirit and principles of the Brunette Basin Management Plan (currently underway).
4. Work with utility leaseholders to provide adequate drainage from their rights-of-way and encourage them to adopt measures for proper erosion control and silt management.

6.5 Environmentally and Ecologically Important Areas

Objective:

To protect and promote Burnaby Mountain as an area of regional ecological significance.

Actions:

1. Apply the principles and guidelines of the City of Burnaby's ESA Strategy to all management actions and activities within the conservation area.
2. As part of an overall Interpretation Plan for the conservation area (see Section 6.11), educate visitors of the status of Burnaby Mountain as an ESA and to the role of ESAs at the local and regional levels.

Objective:

To protect the conservation area's most ecologically sensitive areas against the negative influences of human use.

Actions:

1. Place priority on research and monitoring within areas identified as having high VHW values.
2. Place priority on upgrading or possibly removing existing facilities in areas identified as having higher VHW values (e.g., implement required improvements to damaged or degraded trails, or trails near watercourses, to meet standards for environmental protection).
3. Limit access within areas identified as having high VHW values to formal trails and sites designated for recreational use.

6.6 Historical and Cultural Resources

Objective:

To protect all sites, artifacts, structures and landscape features within the conservation area that have been identified as significant to, and representative of, the history of Burnaby.

Actions:

1. Conduct a heritage assessment of structures within the conservation area to determine their heritage values and whether or not they are worth retaining (e.g., the former Barnet Rifle Range clubhouse building which was once a school teacher's house during early settlement). If structures are deemed worth retaining, develop adaptive reuse options.

2. Continue to maintain the structures, gardens and public art in the Centennial Pavilion area for their cultural values.
3. Ensure that the North Road historic trail is maintained and interpreted according to Burnaby's current standards and policies for historic sites.
4. Respect heritage policies and general conservation principles adopted by the City of Burnaby (e.g., the recommendations of the Burnaby Heritage Advisory Committee).
5. Develop an interpretive program that communicates the historical and cultural significance of important landmarks or artifacts.

6.7 Visual and Scenic Resources

Objective:

To preserve the visual integrity of the conservation area.

Actions:

1. Identify and map primary and specific viewsheds.
2. Design and situate facilities in a manner that respects the natural and scenic setting of the conservation area.
3. Utilize existing clearings (e.g., east end of the SFU Ring Road) as viewpoints.
4. Manage vegetation to maintain scenic views by thinning or trimming trees which threaten to obscure important views, and by preventing the establishment of alder in cleared areas.
5. Encourage SFU and neighbouring landholders to use plantings and vegetative buffers to screen industrial and urban sites.
6. Refer to agreements between the City of Burnaby and SFU in the University's Official Community Plan, which address the need to manage forest growth in the conservation area to preserve key view opportunities currently available from buildings on the north edge of the campus.
7. View corridor management will be assessed and implemented based on the protection of significant environmental features.

6.8 Access and Linkages

Objective:

To create, maintain and promote linkages between Burnaby Mountain and other regional greenspaces.

Actions:

1. Implement sections of the planned Urban Trail Network in the vicinity of Burnaby Mountain Conservation Area to provide more direct linkages to the conservation area from surrounding neighbourhoods.
2. Review existing traffic signal operations to ensure that access by foot and bicycle is optimized, including the two signals on Barnet Highway and the crossing of Curtis Street.
3. Pursue a long-term objective of an underpass crossing the Barnet Highway to facilitate pedestrian and cyclist access between Burnaby Mountain Conservation Area and Barnet Marine Park. This underpass

could also potentially benefit wildlife moving between Burnaby Mountain and the waterfront (refer to the Concept Plan for proposed location).

4. Work cooperatively with other government agencies, landowners, schools, and community groups to maintain or acquire connecting corridors between Burnaby Mountain Conservation Area and other regional greenspaces. In particular, the Stoney Creek corridor should be planned in cooperation with its environmental stewardship groups to ensure that access is provided in a manner which protects this important salmon-bearing stream.
5. Provide adequate parking at trailheads and staging areas, including parking opportunities to support destination equestrian use (i.e., trailer parking) at the former target range site.
6. Review the lease agreement with the Harry Jerome Sports Centre and consider amending the agreement to permit public use of their parking facilities.

6.9 Recreation Management

Objective:

To provide opportunities for pedestrian use of conservation area trails and open areas.

Actions:

1. Ensure that pedestrians have access to all trails, except where a trail of similar type is located in a nearby location.
2. Provide some pedestrian-only trails to allow pedestrians the opportunity to walk, hike or jog without fear of encountering mountain bikes.
3. Sign all trails according to their designated uses and implement an enforcement program.

Objective:

To provide opportunities for mountain bike use in locations where the activity does not cause damage to trails or environmental values, or create undue conflict with other conservation area visitors.

Actions:

1. Ensure designated mountain bike trail locations conform to environmental sensitivities.
2. Restrict mountain bikes to trails specified within the Management Plan for multiple use or single use (mountain bike only).
3. Implement a conditional review period for mountain biking whereby mountain bike use is monitored according to defined criteria for environmental stewardship and trail etiquette (see Section 8.1).
4. Sign all trails according to designated uses and implement an enforcement and awareness program.
5. Provide some cycle-only trails in suitable areas for more intensive use by mountain bikers; consider designing these trails in cooperation with the mountain bike community.

6. Provide opportunities for mountain bike skills-training in the cleared area near existing Trail 'V'; work with the mountain bike community to determine appropriate use and management of this site.
7. Consider phasing out the activity where mountain bikes are found to damage trails or conservation area values to an unacceptable level, or where they are found to create undue conflict with other visitors.
8. Continue to work with the mountain bike community on trail design and use issues.

Objective:

To provide opportunities for equestrian use in locations where the activity does not cause damage to trails or environmental values, or create undue conflict with other conservation area visitors.

Actions:

1. Ensure designated horse trail locations conform to environmental sensitivities.
2. Restrict horse use to trails specified within the Management Plan for multiple use, including equestrians.
3. Monitor the effects of horse use and consider phasing out the activity where it is found to damage trails or conservation area values to an unacceptable level, or where it is found to create undue conflict with other visitors.
4. Sign all trails according to designated uses and implement an enforcement program.
5. Use the existing clearing at the former target range site to provide parking opportunities for horse trailers.

Objective:

To minimize conflicts between different user groups on conservation area trails.

Actions:

1. Restrict mountain bike and equestrian access to designated trails.
2. Where shared use of trails is encouraged, design trails to appropriate standards for accommodating multiple uses.
3. Educate users to respect other user groups through the use of signage, information kiosks, and volunteer hosts.
4. Enforce trail designation through design measures that restrict undesigned uses and through on-site enforcement.
5. Sponsor programs or events that bring user groups together to increase awareness and respect for all conservation area uses.

Objective:

To provide opportunities for recreational activities that are not dependent on trails, such as bird watching, wildlife viewing, photography, nature and cultural appreciation.

Actions:

1. Continue to maintain the facilities and amenities at the Centennial Pavilion area including picnic tables, wheelchair-accessible trails, the

could also potentially benefit wildlife moving between Burnaby Mountain and the waterfront (refer to the Concept Plan for proposed location).

4. Work cooperatively with other government agencies, landowners, schools, and community groups to maintain or acquire connecting corridors between Burnaby Mountain Conservation Area and other regional greenspaces. In particular, the Stoney Creek corridor should be planned in cooperation with its environmental stewardship groups to ensure that access is provided in a manner which protects this important salmon-bearing stream.
5. Provide adequate parking at trailheads and staging areas, including parking opportunities to support destination equestrian use (i.e., trailer parking) at the former target range site.
6. Review the lease agreement with the Harry Jerome Sports Centre and consider amending the agreement to permit public use of their parking facilities.

6.9 Recreation Management

Objective:

To provide opportunities for pedestrian use of conservation area trails and open areas.

Actions:

1. Ensure that pedestrians have access to all trails, except where a trail of similar type is located in a nearby location.
2. Provide some pedestrian-only trails to allow pedestrians the opportunity to walk, hike or jog without fear of encountering mountain bikes.
3. Sign all trails according to their designated uses and implement an enforcement program.

Objective:

To provide opportunities for mountain bike use in locations where the activity does not cause damage to trails or environmental values, or create undue conflict with other conservation area visitors.

Actions:

1. Ensure designated mountain bike trail locations conform to environmental sensitivities.
2. Restrict mountain bikes to trails specified within the Management Plan for multiple use or single use (mountain bike only).
3. Implement a conditional review period for mountain biking whereby mountain bike use is monitored according to defined criteria for environmental stewardship and trail etiquette (see Section 8.1).
4. Sign all trails according to designated uses and implement an enforcement and awareness program.
5. Provide some cycle-only trails in suitable areas for more intensive use by mountain bikers; consider designing these trails in cooperation with the mountain bike community.

6. Provide opportunities for mountain bike skills-training in the cleared area near existing Trail 'V'; work with the mountain bike community to determine appropriate use and management of this site.
7. Consider phasing out the activity where mountain bikes are found to damage trails or conservation area values to an unacceptable level, or where they are found to create undue conflict with other visitors.
8. Continue to work with the mountain bike community on trail design and use issues.

Objective:

To provide opportunities for equestrian use in locations where the activity does not cause damage to trails or environmental values, or create undue conflict with other conservation area visitors.

Actions:

1. Ensure designated horse trail locations conform to environmental sensitivities.
2. Restrict horse use to trails specified within the Management Plan for multiple use, including equestrians.
3. Monitor the effects of horse use and consider phasing out the activity where it is found to damage trails or conservation area values to an unacceptable level, or where it is found to create undue conflict with other visitors.
4. Sign all trails according to designated uses and implement an enforcement program.
5. Use the existing clearing at the former target range site to provide parking opportunities for horse trailers.

Objective:

To minimize conflicts between different user groups on conservation area trails.

Actions:

1. Restrict mountain bike and equestrian access to designated trails.
2. Where shared use of trails is encouraged, design trails to appropriate standards for accommodating multiple uses.
3. Educate users to respect other user groups through the use of signage, information kiosks, and volunteer hosts.
4. Enforce trail designation through design measures that restrict undesigned uses and through on-site enforcement.
5. Sponsor programs or events that bring user groups together to increase awareness and respect for all conservation area uses.

Objective:

To provide opportunities for recreational activities that are not dependent on trails, such as bird watching, wildlife viewing, photography, nature and cultural appreciation.

Actions:

1. Continue to maintain the facilities and amenities at the Centennial Pavilion area including picnic tables, wheelchair-accessible trails, the

- children's play area, and interpretive signs and displays.
- 2. Encourage use of the conservation area for nature study by working with local groups such as SFU research students or the Burnaby Mountain Preservation Society who has development self-guided nature tours of the mountain.
- 3. Provide education and interpretation opportunities as described in Section 6.11.

6.10 Conservation Area Facilities

Objective:

To provide appropriate recreational facilities which are consistent with the conservation area's vision and mandate.

Actions:

1. Maintain and promote use of a formal network of trails, including loop trails, to allow access to a variety of environments within the conservation area.
2. Initiate a detailed survey to document and manage all trails that have been created within the conservation area.
3. Assess existing trail names and rename those deemed inappropriate in accordance with the parks and Recreation Commission's Park Names and Signs Committee.
4. Rehabilitate the former target range site, including contaminated soils and watercourses, and develop as a parking and staging area for conservation area users and to provide access from the bottom of the mountain.
5. Consider retaining the clubhouse building at the former Barnet Rifle Range site and develop as a visitor interpretive centre.
6. Continue to maintain the structures, gardens and public art in the Centennial Pavilion area.
7. If warranted by demand, provide an upgraded children's play area near the Centennial Pavilion.
8. Consider providing a limited number of smaller-scale facilities along main trail routes, e.g., picnic tables, washrooms, garbage receptacles in appropriate locations.
9. Implement the City of Burnaby's Risk Assessment Process for Burnaby Mountain Conservation Area during the planning and design stage of all new facilities or structures (process is currently in draft form).
10. Support continued salmonid fish hatchery activities on Simon Creek in the former target range sites.
11. Consider the implementation of a highly challenging trail for hikers with numerous stairways similar to the Grouse Grind (a potential location is southwest of the existing Harry Jerome Sports Centre).
12. Consider providing an on-site caretaker at the site of the former target ranges to provide surveillance of the salmon rearing facility and the proposed interpretation centre at the clubhouse building.

Objective:

To provide appropriate parking facilities which are consistent with the conservation area's vision and mandate.

Actions:

1. In the short-term, existing parking provisions, including the availability of parking at the former target range site and at Barnet Marine Park, is expected to be adequate for anticipated demand. If additional parking is added in the future, it should be sited within one of the existing clearings in the conservation area to avoid the need for tree removal (See Section 7.4).

6.11 Education and Interpretation

Objective:

To provide opportunities for interpretation of the mountain's natural and cultural heritage resources.

Actions:

1. Develop a comprehensive Interpretive Plan for Burnaby Mountain Conservation Area which describes specific objectives of an interpretive program, communication mechanisms and implementation strategies; work with local naturalist and history clubs to identify key themes.
2. Promote public awareness and appreciation of the conservation area and its unique natural features, as well as educate users about its conservation values.
3. Develop an interpretive centre and staging area at the former Barnet Rifle Range site.
4. Erect a small pavilion in the Centennial Pavilion area explaining the significance of the Trans-Canada Trail and honouring donors.
5. Retain the salmon rearing facilities at the former Burnaby Fish and Game Club for its educational and enhancement values with an appropriate volunteer sponsor group.
6. Develop self-guiding, interpretive trails and brochures that provide information about the natural and cultural values of the conservation area.
7. Make use of the extensive trail network as a means of providing interpretive opportunities and connections between different conservation area environments.
8. Pursue the possibility of including trails in Burnaby Mountain Conservation Area in other municipal trail programs, for example, the interpretive history trail program recently recommended by the Burnaby Heritage Advisory Committee.
9. Implement a program through the Parks and Recreation Commission Park Names and Signs Committee to establish official names for all trails formalized in the plan.

Objective:

To provide an administrative presence within the conservation area and educate visitors about general rules and regulations.

Actions:

1. Consolidate all areas within the boundary of the conservation area, including the Centennial Pavilion area and the former target range site, under the name "Burnaby Mountain Conservation Area". Ensure all signage and materials related to the conservation area reflect this consolidated name.
2. Provide directional and trail allocation information to visitors through the use of signs at appropriate locations such as trail heads.
3. Consider the use of provincial or internationally recognized signs and symbols for trail use and etiquette.
4. Provide information on conservation area regulations via signs, brochures, and enforcement officers.

Objective:

To inform and educate the users of the conservation area about hazards and other safety issues.

Action:

1. Install signage to warn users of potential hazards to their safety such as steep terrain or hazard trees.
2. Provide printed information, e.g., brochures.

Objective:

To instill a sense of stewardship for the conservation area.

Actions:

1. Provide clear information, by way of maps and signs, about the sensitive areas of the conservation area and potential impacts of human use.
2. Encourage school field trips and community-run activities that make use of the conservation area.
3. Encourage the use of volunteers for research or special maintenance programs within the conservation area which are not normally implemented by City work forces.
4. Encourage nearby residents and other frequent users to act as stewards by promoting low-impact recreation and reporting any problems or issues to the City of Burnaby.
5. Keep interest groups abreast of management activities through direct communication or through the use of newsletters or other information mediums.
6. Organize public events that encourage frequent and infrequent visitors to get to know the conservation area better, e.g., interpretive hikes, bird counts, stream enhancement projects, or trail maintenance days.
7. Provide names to creeks to enhance environmental awareness of these sensitive corridors.

6.12 Research and Monitoring

Objective:

To monitor the health and condition of forests on Burnaby Mountain.

Actions:

1. Conduct an assessment of hazard trees and potential public safety implications.
2. Develop monitoring criteria and monitor the effectiveness of vegetation management actions aimed at improving habitat diversity.
3. Participate with the Ministry of Forests, Canadian Forestry Service, or academic institutions in monitoring forest health indicators, e.g., outbreaks of insects or pathogenic diseases in the conservation area.
4. Encourage academic and forest research institutions to conduct studies on the vegetation of Burnaby Mountain Conservation Area.
5. Prepare a fire prevention and management strategy in coordination with the Fire Department.

Objective:

To increase the level of knowledge of local populations of wildlife on Burnaby Mountain.

Actions:

1. Conduct further sampling for wildlife occurrences on Burnaby Mountain during a range of seasons (according to standards adopted by the Resource Inventory Committee).
2. Maintain records of occurrences of rare or endangered wildlife species and up-to-date files on rare or endangered species likely to occur in the conservation area (CDC tracking lists).
3. Continue to gather data from other sources including annual breeding bird surveys, Vancouver Christmas bird counts, and the Vancouver Natural History Society.
4. In cooperation with other agencies, volunteers or educational institutions, implement a long-term program to monitor the deer population on Burnaby Mountain.
5. In cooperation with other agencies, volunteers or educational institutions, conduct studies on the importance of Burnaby Mountain as a migration corridor for songbirds and other bird species.
6. In cooperation with other agencies, volunteers or educational institutions, conduct surveys of key bird species (e.g., western screech owl, Hutton's vireo) and raptors during migration; and
7. In cooperation with other agencies, volunteers or educational institutions, conduct inventories of amphibians and reptiles in order to better understand and ensure the sustainability of these elements of the conservation area ecosystem.

Objective:

To monitor the health and condition of watercourses in Burnaby Mountain with emphasis on the effects of recreational activities and changes attributed to future development at SFU.

Actions:

1. In cooperation with other agencies, volunteers or educational institutions, undertake detailed surveys of all streams and aquatic habitats, including fish populations, to better understand the mountain's hydrologic regime and habitat capabilities.
2. In cooperation with other agencies, volunteers or educational institutions, implement a program of regular stream monitoring to gauge stream health and identify when changes occur.

Objective:

To increase the level of knowledge on recreational use levels, visitor carrying capacities, recreation impacts, and visitor experiences.

Actions:

1. In cooperation with volunteers or educational institutions, or via electronic monitoring devices, collect data on levels of human use along selected trails to assist in making management decisions regarding maintenance, user designations, and future upgrading.
2. In cooperation with volunteers or educational institutions, consider conducting a visitor experience survey to supplement use data and gauge opinions on management issues and actions for the conservation area.

6.13 Regional and Community Cooperation

Objective:

To develop partnerships and cooperative strategies for enhancing scientific research, resource management, education, and sustainable recreation initiatives within the conservation area and connected green areas.

Actions:

1. Review the lease agreement with the Harry Jerome Sports Centre and potentially revise the agreement to permit public use of their parking facilities when major sporting events are not occurring at the facility.
2. Cooperate with Simon Fraser University, Ministry of Transportation and Highways, utility leaseholders and industry (e.g., Trans-Mountain and Petro Canada) to implement a deer habitat monitoring and enhancement program.
3. Cooperate with leaseholders, specifically utility operators, to establish integrated vegetation and pest management principles for rights-of-way.
4. Cooperate with leaseholders to negotiate terms for the enhancement of existing or new trail systems on utility corridors.
5. Cooperate with adjacent land tenure holders (e.g., SFU and industry) to mitigate the potential impacts of external development on the water quality and quantity within the conservation area.
6. Initiate and support other processes that will improve/maintain water quality in and adjacent to the conservation area, e.g., stream enhancement programs, Watershed Management Plans.
7. Work with adjacent land owners and stakeholders to manage stormwater flow and improve water quality and aquatic habitat based on

recommendation in the Stoney Creek Stormwater Management Plan currently being developed by the Cities of Burnaby, Coquitlam and Port Moody, and in consultation with Westwater Research, BCIT (Burnaby Lake Systems Project), GVRD, other government agencies (DFO and MELP) and the Stoney Creek Environment Committee.

8. Encourage SFU, BCIT and other academic institutions to conduct studies in the conservation area, e.g., baseline inventories, monitoring programs, habitat enhancement studies, and the development of educational and interpretive materials.

Objective:

To maintain a high level of public involvement throughout the implementation process and provide opportunities for users of the conservation area to play a meaningful role in future management.

Actions:

1. Establish an Advisory Committee made up of members of local interest groups, residents, conservation area users, and City of Burnaby staff.
2. Provide a high level of volunteer opportunities for interested individuals or organizations.
3. Liaise on a regular basis with groups representing conservation area users, to ensure a high level of input on key management issues.
4. Continue salmon enhancement efforts on Simon Creek, as begun by the Barnet Fish and Game Club.
5. Initiate a project to name the main watercourses on the north side of Burnaby Mountain.
6. Consider allowing school groups or recreational clubs to "adopt a trail" by offering training and staff support.
7. Create a series of seasonal events to foster awareness of the environmental and recreational attributes of the mountain, such as hiking events or annual review of bird migrations (see Section 8.0).