

# Village of Pemberton **ONE MILE LAKE PARK**

## **MASTER PLAN**

Presented by  
**Judith Reeve Consultants Ltd**  
Landscape Architects  
*and*  
**Toby Russell Buckwell**  
+ partners architects  
#300 - 1650 Alberni St.  
Vancouver BC V6G 1B1

**February 2005**



## INTRODUCTION



One Mile Lake Park provides a picturesque gateway to the Village of Pemberton. It comprises a small lake, the surrounding shoreline and upland forest adjacent to Highway 99 at the south entrance to the town. With improved access, protection of the ecosystems and enhancement of the built facilities, this area will continue to provide a welcome rest stop for residents and tourists alike. Growing numbers of visitors enjoy the variety of activities which are possible within this park. Walking, swimming, boating, and enjoying the views from the shoreline pathway as it winds through a variety of vegetation zones are among the most popular pastimes.

In the autumn, the spawning redds in the salmonid enhancement areas at No-Name Creek and One Mile Creek provide both enjoyment and educational opportunities for schoolchildren and other visitors. Bird watching, hiking, kayaking, dragon boat and canoe practices all take place under the guard of majestic Mt. Currie.

Managing the pressures of increased use by a growing local community and also by an increasing tourism sector, while at the same time protecting the park's unique and fragile ecology, presents a series of challenges which the Village of Pemberton is pro-actively addressing in this Master Plan.

Through community consultation with resident and stakeholder groups at public meetings, the Project Team has been able to develop a design and management process plan which combines the natural heritage features of the park with the future needs and wants of the community. This will be incorporated into the existing OCP and the Village Visions, and will guide the preparation of a Parks Development Cost Charge.

With the aid of this Master Plan, the Village of Pemberton will work to ensure that this historically and culturally significant area will be protected, and will continue to provide refreshment for the soul for many generations to come.



## CONTENTS

Introduction	i
Process	1
Existing Conditions	2
Public-Identified Priorities	5
Environmental Issues and Opportunities	6
Developed Sites – Issues and Opportunities	10
Development Plan	20
Order of Magnitude for Construction	13
Grants Available	21

## APPENDICES

A. Draft Report from B&B Forestry	23
B. Notes from Meeting with Highways Department	32
C. Notes from Stakeholder Meetings	33
D. List of Stakeholders	35
E. Project Team Profile	36
F. Maps	37



## PROCESS

The Project Team first prepared a Biophysical Inventory and analysis of existing Park systems as a base of information for future stakeholder meetings.

Using information received from the Village of Pemberton and the Squamish-Lillooet Regional District, the Project Team then held telephone and/or one-on-one interviews with stakeholders and jurisdictional representatives (see Appendix D, List of Stakeholders). From these interviews, the team developed a preliminary list of issues and areas of public concern.

Public presentations, stakeholder group round table discussions enabled the team to build upon these interviews and to identify issues and opportunities.

Meetings with jurisdictional agencies followed, identifying applicable regulations and boundaries for the Project Team.

The Site Development and Facilities Development Programs (conceptual designs tied to the Village's planning and visioning documents) incorporated a rigorous examination of the issues and implications of the stakeholder input.

Preliminary Concept Plans illustrated the Park's connection to the Town, and outlined future planning implications re: access, public safety, facilities and land acquisition.

This was presented to the public, stakeholders and Council at an evening session.

In the course of preparing the Master Plan, the Project Team identified a number of funding support opportunities by which non-profit groups and societies could apply for grants to complete various components of the Park. These are listed in the Grants Available section of this report.



## EXISTING CONDITIONS



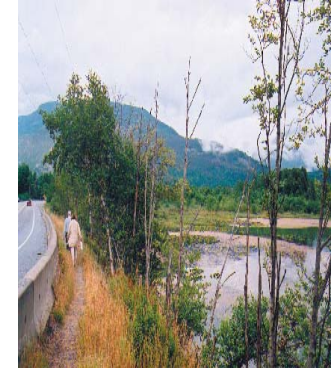
Existing gravel road access from Hwy 99 on relatively steep grade, terminating at beach area (does not meet provincial MoTH requirements). Steep access grade to beach area has deep ruts cut by 2WD accelerating up.

Gravel trail (connecting with reconstructed boardwalk along north end of One Mile Lake and crossing One Mile Creek, runout and go-around at rock bluff) is narrow and dangerous.

Repairs needed to improve wheeled conveyance accessibility to boardwalk.

Railing needed at the runout boardwalk and spawning channels to restrict dogs from entering lake or channels, destroying habitat.

Crossings at One Mile Creek and Pemberton Creek and spawning channels on No Name Creek need repair.



Trails close to spawning channel suffering degradation due to bike use. Spawning channels threatened by beaver activity.

Dog intrusion into swimming area, spawning channels. More dog litter stations needed to encourage "scooping."

Network of non-registered bike trails found in and adjacent to Park is compromising lake water quality.

Washroom maintenance and hours of operation are a key issue.



## EXISTING CONDITIONS



Weeds and lily pads are encroaching on a substantial portion of the lake. This eutrophication may impact the quality of water, increase turbidity and coliform bacteria levels and eventually result in loss of swimming and boating opportunities.

Spiraea invading wetland area and choking out other vegetation of higher value for area fauna.

Culturally Modified Trees (CMTs) and areas of First Nations cultural significance need to be noted and appropriate signage installed.

Overly dense forest growth at upper levels may result in stressed growth more subject to insects and root rots. Opportunities exist for spacing, pruning and disposal of slash in areas of high use, which would fire proof and forest health proof overstocked areas.

## PUBLIC-IDENTIFIED PRIORITIES

1. Treatment of weed growth
  - Is it harming wildlife habitat
  - Will it affect the boating and swimming situations
  - Spiraea - overtaking the natural plant community
2. Expanded swimming area, float and safe beach for small children
  - washroom could be replaced with a solar outhouse
  - more sand and grass
  - update the play area
  - picnic tables (no fires, BBQ only)
3. Improved access and parking from the highway and from the village
  - Gravel trail along highway edge is narrow and dangerous
  - MoTH will not permit access from and along the highway edge in the future
4. Boathouse
  - Boat access from beach is a problem
  - Parking and access from highway is difficult
  - This is a practice area only, not a racing area
  - Launching - need a ramp and dock or float
  - No motorized boating
5. Limit bike use
  - keep bikes up high
  - limit use on the lakeside trail
  - add proper signage
6. Dogs and dog beach
  - Dogs are damaging the lakeshore and habitat
  - Owners need to clean up and stop dogs going into salmon areas
  - Horses and riders have started to use this area for bathing and swimming
7. More picnic and play areas
  - Picnic tables
  - No fires, barbecues only
  - Swings or other play equipment
8. Park expansion
  - Can it move toward a community forest?
  - Move toward Nairn Falls? Signal Hill?
  - Need to expand recreation potential
  - Need to protect the existing forest



## ENVIRONMENTAL ISSUES AND OPPORTUNITIES

### ONE MILE LAKE

- Fed by two creeks – One Mile Creek and No Name Creek
- Intake valve controls flow of One Mile Creek, can be used to control water temperature
- Coho live in the lake year-round and several other species are present
- Adult Coho spawn in No Name Creek during November and December
- No Name outflow has a bridge and spawning area
- Significant deposition at north end results in shallow water with floating leafed pondweed and canary weed grass growth
- Habitat for a long list of birds (see Appendix A, pages 30-31)
- Three small islands of shrubs provide additional bird and fish habitat

### THE LAKESIDE TRAIL

- Character of the trail changes as it moves through different ecotones
- Trail has a very large variety of users – this is causing conflicts
- Restrict trail use to pedestrians in order to preserve the quality of the walking experience
- Restrict trail use to preserve the sensitive landscape features e.g. tree damage caused by unauthorized bike trails
- Cyclists will be encouraged to use the proposed new trail access up the highway with the more immediate connection to Lumpy's, or to move directly up the hill to BC Hydro ROW
- Protect special ecologically sensitive areas between trail and lake edge with low fencing and interpretive signage

### EUTROPHICATION

- Plant growth is extending further into the lake each year
- Lake was once a wetland and if left, would naturally revert
- Lower water temperatures appear to inhibit weed growth
- May consider keeping the intake valve open for longer periods but may be too cold for swimming
- May consider drawing down the lake level and harvesting the weeds
- Mechanical harvesting of weeds without drawdown is expensive, labour intensive and appears to increase the need for harvesting each year
- Environmentally appropriate water edge plantings may be planted to discourage reed canary grass growth and to stop the advance of the spiraea

### NO NAME CREEK

- Environmentally sensitive fish-bearing creek
- Runs parallel to the highway and flows into One Mile Lake at the south end
- Coho spawning areas are visible at the creek mouth
- Existing bridge to be replaced and lengthened
- Adjacent eroded banks to be repaired with riparian plantings and low rock walls

### RIPARIAN WETLANDS

- A birdwatcher's mecca; very little use by fauna
- No species at risk were noted
- All creeks and associated channels are fish-bearing

# ENVIRONMENTAL ISSUES AND OPPORTUNITIES

## MANAGING THE WETLANDS

- Planting conifers on berms and on hummocks will be beneficial
- Review existing conditions to determine species distribution of noxious plants and the native riparian plant community
- Excessive growth of spiraea and reed canary grass needs to be stopped – may use divers, botanists, biologists and limnologist for repairs to natural ecosystem
- Start with some small experimental locations
- Harvesting reed grass and spiraea can be done during the draw down – summer
- Time of year and effect on fish is highly important
- Draw down of lake and tractor harvesting of weeds may be done every few years
- Use harvested weeds as compost for protection of forest areas
- When spiraea expansion is stopped more valuable species can be installed
- Plant marginals or emergents to filter pollution and to provide the missing plant group in the wetland edges
- Realign intake area at Pemberton Creek to produce more flow – coordinate with Dyking District



## MANAGING THE FOREST AREAS

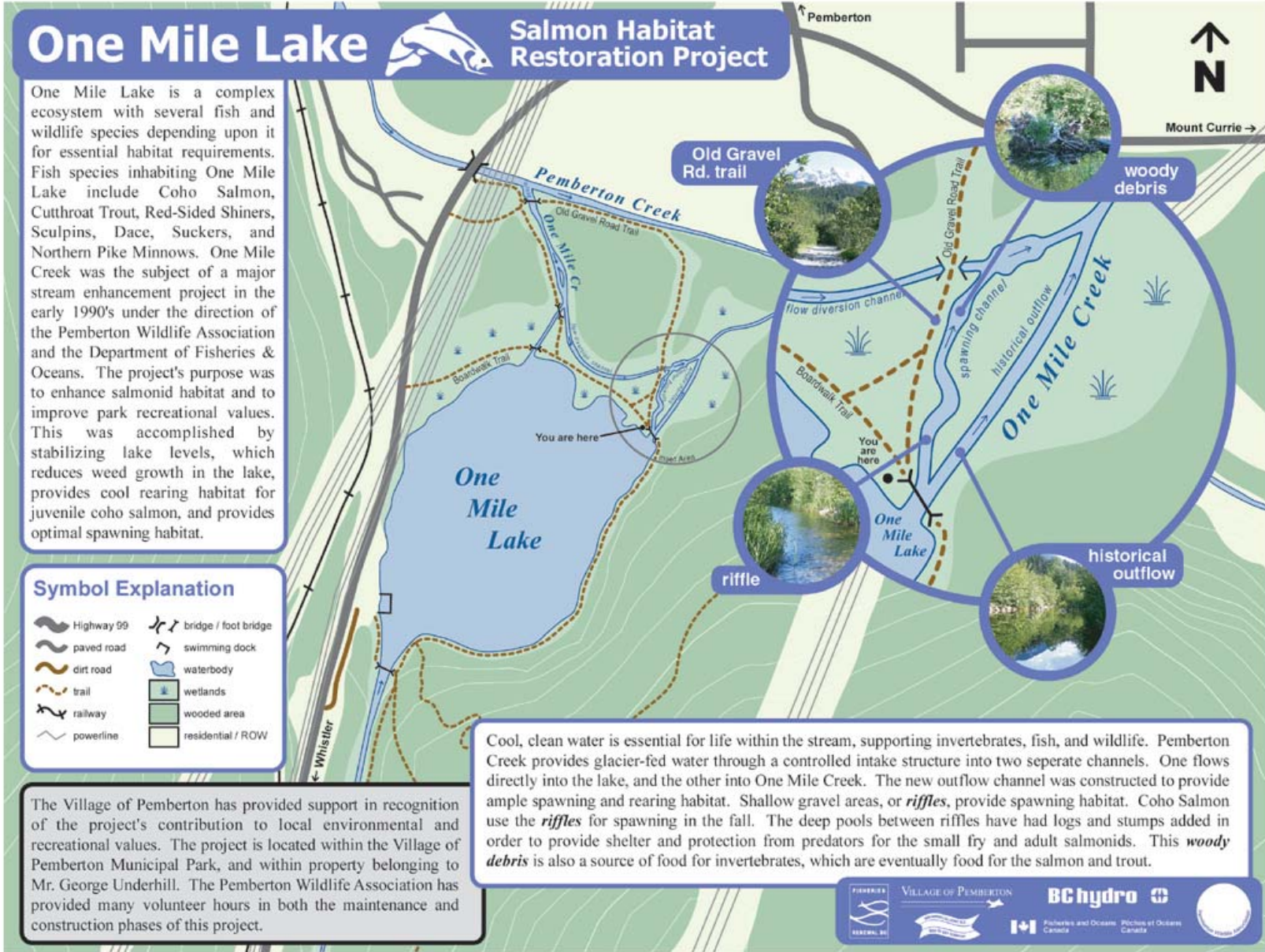
- Fire proofing and clearing the slash in BC Hydro ROW
- Deer habitat/hunting
- Potential for ungulate winter range; evidence of moose nearby
- Bicycle and pedestrian trail system links to several key locations within the community
- Create clearings in the upland forest for wildlife viewing
- Upland forest to be surveyed and trail access and interpretive signage to be installed
- Bike trail “spurs” lead to but not through wildlife viewing areas
- Concern for overuse of trails by cyclists and unauthorized trails can be addressed by reclamation of unauthorized trails, dedicating challenging trails to mountain bikes, and use of bike stiles to limit access to some trails for pedestrians only
- Concern for overgrowth of weeds and determining best management practices
- Concern for safety and protection of CMT’s and First Nations culturally significant locations
- Potential development of interpretive programs/signage by First Nations

# ENVIRONMENTAL ISSUES AND OPPORTUNITIES

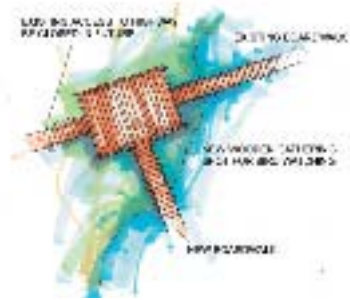
## FOREST TYPES

1. **Cottonwood-Red Alder – flat terrain and sandy soils**
  - Coniferous plantings will provide additional long-term habitat
  
2. **Douglas Fir – Western Red Cedar – Western Hemlock – Big Leaf Maple – Paper Birch – Red Alder**
  - Previously harvested with fire history in lower elevations
  - Fireproof forest, healthproof overstocked areas
  - Provide benches / open spaces for wildlife viewing areas
  
3. **Douglas Fir – Western Red Cedar – Western Hemlock**
  - Mature stand with variable density and crown closure
  - Very little understorey
  - Appears to be healthy
  - Signage needed to identify culturally modified trees (CMT's) and trees of First Nations cultural significance
  - Southeast corner in BC Hydro ROW – work with BCH to reduce slash loading
  
4. **Douglas Fir – Western Red Cedar – Western Hemlock – Paper Birch**
  - Immature stand, appears healthy
  - High Coho spawning potential
  - Old access road can become new trailhead for cyclists
  - No species at risk
  - Lumpy's and other bike/hike trails noted in this zone



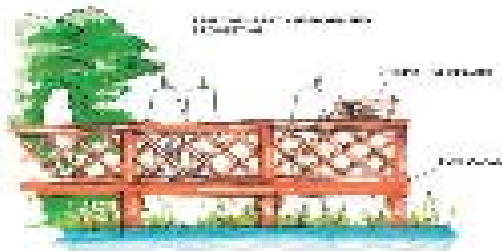


# DEVELOPED SITES ISSUES AND OPPORTUNITIES



## EXTENDED BOARDWALK

- No future access from highway
- New boardwalk follows the west shore and connects the extended swimming beach to the existing boardwalk
- For immediate safety add a kickplate and a gentler slope for disabled access
- See boardwalk info in appendix



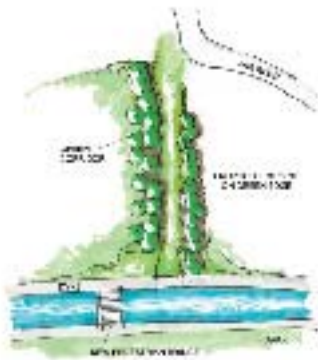
## BOARDWALK LOOKOUT POINT

- Remove old wooden float from water's edge
- Protect the shoreline end of the point
- Create a fenced lookout platform with interpretive signage on railings and wooden benches for birdwatching
- This could be an environmental repair area by encouraging alder growth to shade out the canary reed grass



## GRAVEL AREA TO NORTH OF WETLANDS

- Across from tennis court and washrooms
- Under BC Hydro lines
- Possible active use area
- Soft open space
- Beach volleyball court
- Issue of safe access across highway (Ministry of Highways cannot approve access across highway)



# DEVELOPED SITES ISSUES AND OPPORTUNITIES

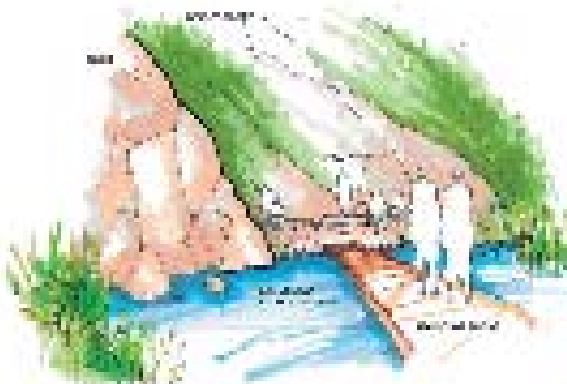
## BICYCLE TRAILS AND ACCESS

- Cycle access over new pedestrian bridge from the Junction
- Pedestrians and cycles share use of path until Salmonid Enhancement area bridge. New bridge railings and fencing keep bikes out of stream
- After bridge crossing, signposts direct cyclists to challenging steep, switchbacked trail to BC Hydro right-of-way, eventually connecting with Lumpy's at SE sector of park
- Bike stiles placed to permit pedestrian-only access to lakeside trail
- Trails to be surveyed for safety and maintenance requirements



## SALMONID ENHANCEMENT AREA

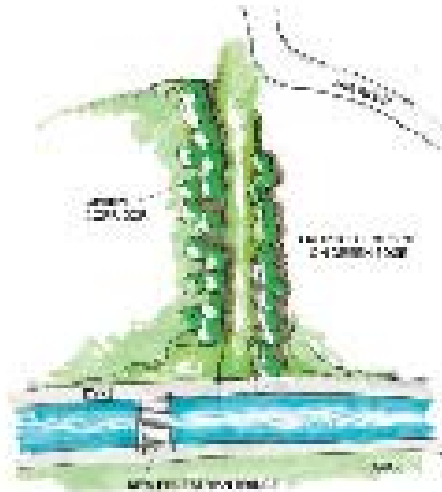
- 100m spawning channel by PWA and DFO
- Conflicts: people, bicycles, dogs, horses, beavers, salmon
- Propose swamp fencing along west side of channel to keep dogs and horses out of water
- Repair bridge, add railings with wire screening, possibly lengthen bridge to protect shoreline
- May consider rip rap along stream edges for beaver management



## THE CLIFF

- Favourite swimming place for young people due to late day sun and separation from the family beach
- Boardwalk creates an exciting tippy element
- Enlarge rock terrace to create more space for swimming and stopping on the pathway
- For safety reasons, remove rope swing
- Add a swimming float with diving board
- Emergency vehicles access through gate at north end

# DEVELOPED SITES ISSUES AND OPPORTUNITIES



NEW PEDESTRIAN ACCESS FROM THE JUNCTION



## NORTH END OF LAKE

- A new access point will be developed from the Village Junction down the Vine Road pedestrian greenway to the park area north of the dyke.
- Parking will be along the dedicated park edge
- A new bridge, to be donated by Serge Cote, will carry pedestrians to the north-east corner of the park
- There will be no access from the highway at either the boardwalk or the cattle guard entrance

## GROUP PICNIC AREA

- Open sunny area in NE part of park next to Underhill property
- No underbrush under trees
- May have shelter, washrooms, grass, BBQ pit
- May be a user-pay area

## DOG BEACH

- Keep in same location but add fencing and more riparian plantings on either side to stop beach from expanding along shoreline
- Add dog litter bag dispenser and garbage container

## VOLUNTEER ACTIVITY

- Almost all developed sites have been undertaken by volunteer activity
- Volunteers need to be recognized
- High potential for further volunteer and P3 work

# DEVELOPED SITES ISSUES AND OPPORTUNITIES

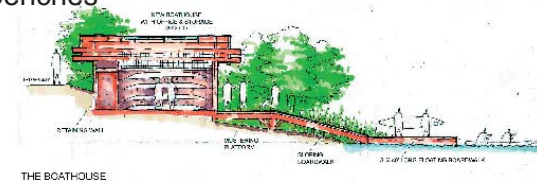


## ACCESS, PARKING AND NEW FACILITIES

- Existing parking is limited and it is difficult to turn trailers around
- New access road will be about 0.8 km south on the highway, and will provide a left turn slot for southbound traffic
- New parking and access point for unloading bikes, boats and trailers will provide good connection to Lumpy's trail and to Nairne Falls.
- Parking will extend down the hill to a new turnaround area near the boathouse and a future park services building
- Future location for boathouse, showers and washrooms, concession, lookout point and caretaker's suite
- The existing parking beyond the point will be closed and turned into green space

## EXPANDED / ENHANCED SWIMMING BEACH

- Expansion directly north of present area
- Connects to new boardwalk
- Vegetation removal, grading
- Import and place washed river sand to fill along lake edge
- Add no post barriers along highway edge
- Add plantings for erosion control and shade
- Create a safe "small children's area" with "no horses or dogs allowed" during swimming season
- Install more grass, sitting rocks, benches
- Emergency vehicle access point



# DEVELOPMENT PLAN

## Summary of Facilities and Uses

The park currently supports a variety of uses. Additional uses are recommended to enhance the capability of the park to meet the present and future needs of the community. The following table provides a summary of the existing and new uses for the park.

No.	Description of Facility	Suggested Action			Add Facility
		Remove	Retain	Enhance	
1.	Paths, trails and boardwalk		✓	✓	
2.	Passive open space for walking, sunning and birdwatching		✓	✓	
3.	Upland forest areas		✓	✓	
4.	Streams		✓	✓	
5.	Interpretive signage		✓	✓	✓
6.	Picnic area and shelter in NE corner				✓
7.	Swimming beach		✓	✓	
8.	The cliff and boardwalk		✓	✓	✓
9.	Children's beach area				✓
10.	Public washroom facility		✓	✓	
11.	Park building, caretaker residence, concession and serve as classroom & multi-purpose area for gathering & nature study groups				✓
12.	Parking and access road		✓	✓	
13.	Active area in gravel open space directly north of boardwalk				✓
14.	Boathouse & washroom with dock for dragon boats, canoes and kayaks				✓
15.	Dog areas		✓	✓	
16.	Salmon spawning grounds		✓	✓	
17.	Floats		✓	✓	

## ORDER OF MAGNITUDE FOR CONSTRUCTION



Construction components of this project are listed below in order of cost magnitude, and not in order of priority. When construction commences, certain areas must be developed interdependently. For example, the swimming beach will be expanded north of the shoreline prior to building the new access road and parking, but the green space component of this item cannot be installed until after completion of the road and parking relocation.

Estimates shown are based upon current cost allowances for Pemberton area construction. Estimates are subject to final design, donation and volunteer help. A contingency of 15% of the total estimated amount is normally added, but is not included in the figures shown below. For all components a further 15% of total estimated amount will be allocated for fees and approvals; this amount is not included in the amounts shown.

Certain project components are to be carried out by the Village of Pemberton and these have been prioritized accordingly in the list below. Projects with potential for volunteer involvement and/or community partnerships are listed further down in the order of magnitude because their estimated costs may be affected by donations of in-kind labour and materials. This does not imply that they have a lower priority for completion or that they are a less important component of the One Mile Lake Park project. In many cases, these are essential to the well-being of the Park and will be undertaken by volunteers and community groups concurrently with Village initiatives.

## ORDER OF MAGNITUDE FOR CONSTRUCTION

No.	Description of Work	Est. Amount
<b>1.0</b>	<b>Access Road (1 km) and Parking</b> <u>Includes:</u> 1.1 Clearing and grubbing 1.2 Sub-base prep, granular sub-base, granular base and grading 1.3 Hydroseeding for erosion control 1.4 Landscaping 1.5 Signage (infrastructure, power and water – see item 3.1 below)	<b>≠ 750,000</b>
<b>2.0</b>	<b>Expanded swimming beach</b> <u>Includes:</u> 2.1 Clearing and grubbing 2.2 Grading and drainage 2.3 Slope stabilization 2.4 Installation of subgrade and washed river sand 2.5 Trash receptacles 2.6 Shade trees 2.7 Site furnishings	<b>500,000</b>
<b>3.0</b>	<b>Park Service Building with Caretaker Suite and Washrooms. Connections to Boathouse, Beach, Access Road and Parking</b> <u>Includes:</u> 3.1 Services: water/power for this building, the boathouse and access road 3.2 Signage 3.3 Roadway and turnaround 3.4 Demolish existing washroom building 3.5 Site preparation, grading and drainage 3.6 Walkways: 1 @ 10' x 60'      1 @ 25' x 35'      1 @ 8' x 90' 3.7 Gravel parking area 3.8 Final grading, drainage, landscaping	<b>351,000</b>

# ORDER OF MAGNITUDE FOR CONSTRUCTION

<p><b>4.0</b></p>	<p><b>Weed Management</b>            Significant volunteer/community partnership possibilities</p> <p><i>Includes:</i></p> <ul style="list-style-type: none"> <li>4.1 Analysis by Biologist, Botanist, Limnologist, Ecologist (significant volunteer work)</li> <li>4.2 Diving to analyze existing conditions</li> <li>4.3 Water temperature analysis (<i>volunteer – call Lisa</i>)</li> <li>4.4 Drawdown and harvesting – years 1-3</li> <li>4.5 Reconfigure One Mile Creek entrance from Pemberton Creek (DFO and Diking District)</li> <li>4.6 Dredging in One Mile Creek below intake valve</li> <li>4.7 Experimental plantings (volunteers)</li> </ul>	<p><b>Not available</b></p>
<p><b>5.0</b></p>	<p><b>Boathouse, office and storage</b>            Size: 30' x 60'</p> <p><i>Includes:</i></p> <ul style="list-style-type: none"> <li>5.1 Boathouse construction               <ul style="list-style-type: none"> <li>5.1.1 Site development, grading and drainage</li> <li>5.1.2 Retaining walls</li> <li>5.1.3 Foundation</li> <li>5.1.4 Timber construction</li> <li>5.1.5 Metal roof – drain to rock pits</li> </ul> </li> <li>5.2 Boardwalk/deck (25'x30') in front of building</li> <li>5.3 Boardwalk and dock (8'x90') on lake</li> <li>5.4 Plantings around building</li> </ul>	<p><b>86,300</b></p>

## ORDER OF MAGNITUDE FOR CONSTRUCTION

<b>6.0</b>	<p><b>Small Children's Play Area</b>            Size: 35' x 75' = 2,700 sq. ft.  <u>Includes:</u></p> <ul style="list-style-type: none"> <li>6.1 Design drawings with volunteers and parent stakeholders</li> <li>6.2 Site development costs               <ul style="list-style-type: none"> <li>6.2.1 Remove existing grass and gravel</li> <li>6.2.2 Site preparation</li> <li>6.2.3 Grading and drainage</li> </ul> </li> <li>6.3 Fencing, sand, grass and equipment</li> </ul>	<b>76,000</b>
<b>7.0</b>	<p><b>No Name Creek</b>  <u>Includes:</u></p> <ul style="list-style-type: none"> <li>7.1 Reinforcing rocks along path and bank edges</li> <li>7.2 Drainage</li> <li>7.3 New bridge with railings</li> <li>7.4 New signage</li> <li>7.5 Plantings to shade creek edges</li> </ul>	<b>40,000</b>
<b>8.0</b>	<p><b>Cycling Trails</b>  <i>Opportunity for significant volunteer involvement</i>  <u>Includes:</u></p> <ul style="list-style-type: none"> <li>8.1 Grading and drainage repair</li> <li>8.2 Vegetation removal as required</li> <li>8.3 Reinforce edges with rocks and logs</li> <li>8.4 Install bike stiles at trail entrances</li> <li>8.5 New signage and map</li> <li>8.6 Replanting and reclamation of illegal paths</li> </ul>	<b>See BC Parks Trails Update</b>

## ORDER OF MAGNITUDE FOR CONSTRUCTION

<p><b>9.0</b></p>	<p><b>Lakeside Trails (North End)</b>  <i>Opportunity for significant volunteer involvement</i>  <u>Includes:</u>            9.1 Analysis of drainage problems            9.2 Wood and wire fencing along west edge of trail            9.3 Analysis of beaver activity            9.4 New plantings of water-loving trees            9.5 Install wire cage tree protectors            9.6 Grading to create a higher walking surface along trail            9.7 Grading to create berms and high points for tree planting</p>	<p><b>30,000</b></p>
<p><b>10.0</b></p>	<p><b>The Cliff and Floats</b>  <u>Includes:</u>            10.1 Analysis of safety issues            10.2 Design of enlarged rock terrace            10.3 Construction by hand or bobcat only            10.4 Removal of rope swing            10.5 New float with diving board</p>	<p><b>25,000</b></p>
<p><b>11.0</b></p>	<p><b>Boardwalk</b>  <u>Includes:</u>            11.1 Extension along west side of lake            11.2 Construction of platform at junction of two boardwalks            11.3 Removal of ramp access to highway            11.4 Benches and interpretive signage</p>	<p><b>Up to \$30/sq. ft.</b></p>
<p><b>12.0</b></p>	<p><b>Dog Areas</b>  <u>Includes:</u>            12.1 Install gravel to remedy muddy edge            12.2 Wood and wire fencing in either direction            12.3 Augment existing plantings at edges            12.4 Garbage can and scooper bags            12.5 Log bench</p>	<p><b>7,000</b></p>

## ORDER OF MAGNITUDE FOR CONSTRUCTION

<b>IDENTIFIED COMMUNITY PROJECT OWNERSHIP OPPORTUNITIES</b>		
<b>13.0</b>	<b>Forest Management</b> <u>Includes:</u> 13.1 Fire Protection Program (ref. John Davies) 13.2 Danger tree assessment and removal 13.3 FN & CMT identification and signage (by Mt. Currie Band) 13.4 Slash clearing in BC Hydro ROW (BC Hydro funding) 13.5 Install low fencing for protection of ecologically sensitive areas on riparian edges	<b>\$1,000/ha.</b>
<b>14.0</b>	<b>Picnic Area and Shelter in NE sector</b> <i>Revenue-generating possibilities</i> <u>Includes:</u> 14.1 New picnic shelter 20' x 40' (volunteer construction) 14.2 Picnic tables, 50% disabled-accessible 14.3 Site development/servicing, underground drainage 14.4 Topsoil and finish grading, grass seeding	<b>113,000</b>
<b>15.0</b>	<b>Active Area in Gravel Open Space</b> <u>Includes:</u> 15.1 Site Development: clearing, grading 15.2 Sand Volleyball Court 15.3 All-weather surface c/w basketball nets, equipment 15.4 Washroom (20' x 20') <b>OR</b> Porta-John with tank	<b>80,000</b>
<b>16.0</b>	<b>Salmonid Enhancement Area</b> Volunteer Opportunities to Continue <u>Includes:</u> 16.1 Protection of stream beds and banks 16.2 Concept plan for approval – DFO as required 16.3 Rip rap along channel for beaver protection 16.4 Swamp fencing at west side of channel 16.5 New bridge with railings 16.6 Fencing and plantings to protect stream near bridge	<b>15,000</b>
<b>17.0</b>	<b>Passive Open Space for Walking and Birdwatching</b> (volunteer/community partnership possibilities) - Specific location to be determined	<b>\$15/sq ft</b>

## GRANTS AVAILABLE

**BRAINERD FOUNDATION** [www.brainerd.org/brainerd](http://www.brainerd.org/brainerd)

\$250 - \$3,000 Opportunity Grants to organizations involved in direct conservation efforts or to defend endangered ecosystems.

**ECOACTION** [www.pyr.ec.gc.ca/ecoaction](http://www.pyr.ec.gc.ca/ecoaction)

Funding for projects that focus on migratory birds and their habitat.

**KONGSGARD-GOLDMAN FOUNDATION** [www.kongsgard-goldman.org/program](http://www.kongsgard-goldman.org/program)

\$1,000 - \$15,000 grants for projects emphasizing citizen involvement, sustainable land use, conservation and restoration.

**McLEAN FOUNDATION** [www.mcleanfoundation.on.ca](http://www.mcleanfoundation.on.ca)

\$500 - \$50,000 (average grant is \$5,000) for environmental conservation and restoration projects.

**MOUNTAIN EQUIPMENT CO-OP ENVIRONMENTAL FUND** [www.mec.ca/envirofund](http://www.mec.ca/envirofund)

Up to \$10,000 for projects that facilitate public access to and/or recreational use of areas having significant recreational or wilderness value;

**PUBLIC CONSERVATION ASSISTANCE FUND** [www.hctf.ca/pubcon](http://www.hctf.ca/pubcon)

(\$2500 - \$10,000 for projects that maintain, conserve, or restore native fish or wildlife species and their habitat.

**RBC FOUNDATION** [www.rbc.com/community/donations/focus](http://www.rbc.com/community/donations/focus)

Funds for conservation/protection of sensitive habitats.

**RESOURCES FOR COMMUNITY COLLABORATION** [www.rccproject.org](http://www.rccproject.org)

\$5,000 - \$10,000 for community-based collaborations that develop solutions for long-term protection, sustainable use or restoration of places of ecological significance.

**SCHAD FOUNDATION** [www.husky.ca/ehs/en4a](http://www.husky.ca/ehs/en4a)

Funds conservation and preservation projects.

**SHELL ENVIRONMENTAL FUND** [www.shell.ca/code/values/environment/sef](http://www.shell.ca/code/values/environment/sef)

Up to \$5,000 for projects that propose action-oriented ways of protecting the environment, including naturalization and environmental education projects.

**TD FRIENDS OF THE ENVIRONMENT FOUNDATION** [www.td.com/fef](http://www.td.com/fef)

Funds projects that protect and preserve environment, assist young Canadians in participating in environmental activities, and enhance partnerships among environmental organizations.

**UNILEVER-EVERGREEN AQUATIC STEWARDSHIP GRANT PROGRAM** [www.evergreen.ca/en/cg/cg-funding](http://www.evergreen.ca/en/cg/cg-funding)

\$2,000 - \$10,000 to community-driven partnership projects including wetlands, riparian and littoral restoration, in-stream bioengineering and wildlife monitoring.

## APPENDICES

- A. Draft Report from B&B Forestry
- B. Notes from Meeting with Highways Department
- C. Notes from Stakeholder Meetings
- D. List of Stakeholders
- E. Project Team Profiles
- F. Maps
  - Trails Map
  - Village of Pemberton Maps

# APPENDIX A - DRAFT REPORT FROM B&B FORESTRY

## ONE MILE LAKE PARK

One Mile Lake Park is located within the municipal boundaries of the Village of Pemberton (VoP). Hwy. 99, BC Rail lines and BCHydro R/W lines are found within the Park boundaries along the west boundary with a small area at the southeast corner of the Park that is within the BC Hydro R/W. A dyke has been constructed along the north bank of Pemberton Creek. There are old access routes throughout the Park, some which were used to log the area in the 1950's. In addition to the logging history, there is evidence of wildlife(s) through much of the standing forested types found within the Park boundaries.

The natural features found within the Park are One Mile Lake with two fresh water intakes, a wetland/marsh area and forested north/northwest facing slopes.

Approved development within the Park boundaries include a graveled access route/parking lot; beach area, boardwalk, lakeside trail and toilet facilities. Recently constructed tennis courts and public washrooms are located on the west side of the highway adjacent to the Creekside housing development. The Ministry of Forests has Recreation label #6042 on an old access/new bike trail that relates to the Sea to Sky Bike Trail system. There are several other 'non-authorized' bike trails located within the boundaries of the Park that connect to the Pemberton community, Nairn Falls Provincial Park and the Sea to Sky Bike Trail system.

Salmonid enhancement work has resulted in the creation of One Mile Creek that flows into One Mile Lake and into a flow diversion channel that joins up with a constructed spawning channel and the historical outflow from One Mile Lake into Pemberton Creek that eventually flows into the Lillooet River. Foot bridges/crossings have been constructed over these channels.

One Mile Lake Park lies within the Coastal Western Hemlock Biogeoclimatic zone, dry subarctic variant (CWHds1). The CWHds1 has a climate that is transitional between the coast and the interior and is characterized by warm, dry summers and moist, cool winters with moderate snowfall. The growing seasons can feature water deficits on zonal sites. Generally, forests are dominated by Douglas fir, Western hemlock and Western cedar and the understory is characterized by relatively poorly developed shrub and herb layers featuring falsebox, prince's pine, dull Oregon grape and queen's cup with a well developed moss layer dominated by Hylocomium, Rhytidiopsis, Pleurozium and Rhytidiadelphas.

This Biogeoclimatic zone is within the natural disturbance type 2 (NDT2). The ecosystems within the NDT2 have infrequent stand-initiating events. Stand initiating disturbances are those processes that largely terminate the existing forest stand and initiate secondary succession in order to produce a new stand. The disturbance agents are mostly wildfires, windstorms and to a lesser extent insects and landslides. The description for NDT2 indicates that these forest ecosystems were usually even-aged but extended post-fire regeneration periods produced stands with uneven aged tendencies. Wildfires were often of moderate size (20 – 1000 hectares) with unburned areas resulting from sheltering terrain, higher site moisture or chance. Many larger fires occurred after periods of extended drought, and as a result of these fires, the landscape would have consisted of extensive areas of even aged stands with snags and veteran trees that had survived previous fires with small areas missed by the burns. The mean return interval for these disturbances is 200 years.

One Mile Lake Park has been classified into four (4) ecological associations: developed sites, lake, riparian/wetland and forest cover

*Developed Sites:* for the purposes of this submission, developed sites mean those sites developed by the VoP or other parties under the direction or permission of the VoP.

Access into the Park is via gravel road that leaves Hwy. 99 approximately 1.2 km south of the entrance to Pemberton. The access route is on a relatively steep grade (8-12%) and terminates at the beach area. There is evidence that the access went past the beach area and connected to hwy. 99; at some point this access was and remains blocked off (MoTH requirement??)

The parking area stretches from the junction with the highway to the beach area. There is a grassed buffer between the access/parking area and the beach. In addition to the U shaped board walk/dock there is a swing set, a picnic table, a bench and standing barbeques available for use. Tree cover/shade is available at the south end of the beach area. The washrooms are located just south of the beach area.

Visitors to the Park can connect with the Lakeside trail by travelling south, crossing a no name creek or travelling north using a gravel trail that parallels hwy. 99. This section of the trail is very narrow and protection to users is given by the no posts in selected areas. This graveled trail connects with the recently re-constructed board walk that follows the north end of One Mile Lake and crosses One Mile Creek. The board walk continues for a short distance past this point then connects with a run out board walk and the dirt trail that parallels One Mile Creek and joins up with the main trail that crosses Pemberton Creek and follows around the Lake. The run out board walk terminates just short of the shoreline of One Mile Lake. A short section of boardwalk has been constructed on the west side of the lake as a safe go around to a large rock outcropping.

There are other access points to the Lake trail. The cattle guard road comes off hwy. 99 just south of the north boundary of the Park. A short distance into the Park this access connects to the trail that parallels One Mile Creek and an access route/trail that parallels Pemberton Creek for a distance before heading south and joining up with the main trail at Pemberton Creek at the spawning channel. Opportunities also exist to connect to the lake trail using any one of the bike trails found in and adjacent to the Park.

The developed areas of access, beach/play area are not home to any significant flora or fauna species. The boardwalk and gravel/dirt trails are used extensively by hikers, bikers, bird watchers and members of the general public using the lake for swimming and non-motorized boating.

*Issues:*

- Access into the Park off hwy. 99 – line of sight does not meet MoTH requirement of 300 meters (probably why there is no signage acknowledging the Park). There is potential to hook into old access system just south of tower 65-3 on 2L02 or to connect access from the existing hwy.99 between towers 65-3 and 66-1. Line of sight good for traffic heading north, not quite legal for traffic heading south – however, speed limit could be reduced to 50 or 60 (60 sign just past tower) and/or a turning lane constructed. New access would parallel hwy. 99 and join in with old access, opening up more parking and bikers could hook into old access system that joins up with trail system (Lumpy's, etc.)
- Steep grade to beach area – gravel road – 2 wd cause ruts. Steep grade useful in winter for tobogganing

- Trail heading north – narrow and dangerous for MKD's and the elderly – widen and move no posts out to create width. Should be continued past board walk to Pemberton Creek bridge – install foot bridge on west side or keep no posts along to traffic light at corner
- Foot bridge (Serge Cote ??) – construct on Park property north of Pemberton Creek – property is flat – used as parking lot for users. Access adjacent to Cap hwy's. Lot.
- Trails close to lake/spawning areas – degradation occurring. Limit bike use to higher ground – use lake trail for foot traffic only – keeps trails narrow, less maintenance.
- Boardwalk – fix wheelchair ramp, install kick plate. Run out boardwalk – install railing/gate to restrict dogs from entering lake – destroying vegetation. Fix crossings on One Mile creek and spawning channel/Pemberton Creek. Crossing at no name creek – lengthen and secure, channel water off trail to prevent entrance of deleterious substance into fish spawning area.
- Signage doesn't work – dogs run free in swimming area, into lake, into spawning channel no stoop and scoop. Area by spawning channel should be closed off to dogs and a new area developed that is less sensitive.
- Toilets, maintenance and hours of operation are a key issue.

*Lake:* two creeks feed one Mile Lake: One Mile Creek that flows from Pemberton Creek and a no name creek flows into the lake at the south end. An intake valve can control the flow of One Mile Creek. There is a substantial amount of deposition in the north end of the lake and there are three (3) small islands of shrub found within the lake. Yellow pond lily, floating leaved pondweed and grass-leaved pondweed are noted throughout the lake, with higher concentrations of floating leaved pondweed at the northern end and yellow pond lily at the outlet channel.

The lake is used for swimming, non-motorized boating, fishing and has been the training grounds for the Laoyam Eagles/ Bald Eagles and Pemberton Spirit Dragon boat.

Using Ministry of Forests classification the lake would be classified as L1B (>5 ha) and would have a Riparian Management Area of 10 meters broken down as follows (Riparian Reserve Zone 10 meters, Riparian Management Zone 0 meters).

Coho salmon live in the lake year round. Adult coho spawn in the "no name" creek at the south end of the lake from November to December. The lake supports healthy overwintering habitat for coho fry. According to the FISS Data base, other species present include cutthroat trout, northern Pikeminnow, rainbow trout, red shiner and sucker. Several fisheries enhancement projects have occurred at the lake including placement of spawning gravel at "no name" creek, construction of a weir at the outflow to maintain lake levels, construction of the inflow diversion channel from Pemberton Creek to help lower lake temperatures and the construction of a 100 meter spawning channel at the lake outlet. All of the enhancement work was done by the local Pemberton Wildlife Association with assistance from Fisheries and Oceans Canada.

Trumpeter swan, Canadian geese, Great Blue heron (Blue listed) and Common Loon have been noted on the Lake along with a variety of duck species. There is an Osprey nest to the south of the Park boundary and it is suspected that the Osprey feeds on fish from One Mile Lake. A Turkey Vulture (Yellow listed) was noted in June, 2003 in the standing trees on the west side of hwy 99 above the lake.

(Appendix I and II = birds noted in the area, including those noted above.)

*Issues:*

- Trail system compromising RMA of lake. Restriction of bikes on Lake trail, cutting off access at boardwalk, and other sensitive sites and restoring vegetation, including planting of coniferous species on elevated sites.
- Concern with lake filling in and eutrication – loss of key feature of lake ie. swimming and potentially, the lake itself. An objective of the intake installation was to combat weed growth. According to a PWA report, there was a noticeable decrease in the weed growth at the beach area. The weed growth should be monitored and its impacts on swimming, paddling and birding should be assessed.
- Use of 'islands' for alternate sunning/docking site??; bird boxes??
- Upgrade/extension of boardwalk east side of lake - sunning area?
- VoP – control water intake; dredging lake; harvesting weeds in lake – timing, methodology, etc. (Fish bearing lake and creeks – involvement of DFO, WLAP, PWA , etc.
- Need to block dog access to important and sensitive fish habitat, specifically around the outlet channel at the bridge crossing.
- Weed harvesting weeds in lake – timing, methodology, etc. (Fish bearing lake and creeks – involvement of DFO, WLAP, PWA , etc.

*Riparian/Wetland:* Riparian areas are associated with creeks and lakes and are rated according to width. One Mile Creek, Pemberton Creek and associated channels and the no name creek on the South end are fish bearing and are considered S3 (>1.5 <5m width). The wetland/marsh is considered W1 based on size (<5 ha). Vegetation found in and adjacent to One Mile Creek and Pemberton Creek are comprised of Cottonwood, Red Alder, Willow, Red osier dogwood, Flowering dogwood, Red elderberry, Black twinberry and grasses. There is a significant amount of hard tack (*Spirea* spp.) that is expanding and choking out other vegetation that has higher value for fauna utilizing the area.

The vegetation around One Mile and Pemberton Creeks is consistent with the wetlands. No name creek to the south and the area immediately adjacent to the Lake is associated with forest cover and the vegetation is comprised of Western red cedar, Douglas fir, Western hemlock, Big leaf maple, Paper birch, Red alder, Cottonwood, Douglas maple and willow. Red elderberry, saskatoon, huckleberry (red and black), Black twinberry, rose spp., Gooseberry, Salmonberry, thimbleberry , Oregon grape, boxwood, and herbaceous species of horsetail, wild ginger, false Solomon seal, false lily, twinflower, prince's pine, alum root, cleaver, rattlesnake plantain and skunk cabbage.

No species at risk were noted in the Riparian/wetland area and there was little evidence of use by fauna. Deer have been noted in the adjacent forest stands. This area is a bird watchers mecca and has invaluable habitat for a range of LBJ's and other smaller fauna (butterflies, dragonflies, etc.).

*Issues:*

- Salmonid enhancement work has created berms that support deciduous or hardwood stands of Cottonwood and Red alder and brush species as shown above. Planting coniferous stems (Spruce, Western red cedar and Douglas fir) on the berms would be beneficial to this zone.

- Spirea expansion should be looked at with a view to eradication and installation of species that have higher habitat/food values to a variety of species.

Forest:

Four distinct forest types have been noted within the Park.

1. Cottonwood –Red Alder: north of wetland/marsh area and is associated with portions of the salmonid enhancement areas. The leading deciduous species are Cottonwood and Red alder. Willow, Red elderberry and Red osier dogwood is also present and there is a high amount of Black twinberry. The terrain is flat, soils are sandy with little coarse fragment noted. There is evidence of flooding, and it would appear that there are short periods of time where the zone is under water. There are gravel access systems/trails throughout this zone which assists those using the area for a variety of uses. This zone has high habitat value for a range of bird species and smaller mammals (squirrels, rabbits, bats. etc.). Evidence of deer was noted throughout this zone. No species at risk or provincially important species were noted. The zone receives a high amount of use by bird watchers, hikers, bikers and walkers.

*Issues:*

- Plant coniferous species on elevated growing sites to provide additional habitat for a range of species over the long term ie. life expectancy of conifers >200 years; deciduous – 35 years.
  - Look at deactivating or gating access routes to restrict ATV, dirt bike use
  - Dyking south side of Pemberton Creek
2. Douglas fir, Western red cedar, Western hemlock with lesser amounts of Big leaf maple, Paper birch and Red alder. This type has been previously harvested ( mid 1950's) and has a fire history at lower elevations. There is a veteran component of Douglas fir and Western red cedar (>250 years of age) throughout. The density of this type varies from open to dense patches of immature stems in age class 2. Slopes in this type range from 0 along the lake and on small benches to >60% to over 100% (rock controlled) The lower slopes tend to have better site conditions and can support a higher density of coniferous stems. The upper slopes which tend to be more xeric and have been disturbed (access/landing sites, rock outcrops) cannot support the high density of coniferous stems present which may result in stressed stems that are more susceptible to insects (spruce bud worm, mountain pine beetle, douglas fir bark beetle) and root rots. There are snags and windthrow scattered throughout this type and is more pronounced on areas with shallow soils and high rock content. Boxwood, Mahonia, Spirea, Douglas maple, Willow, Saskatoon and Thimbleberry. An old access route is now utilized as a biking/hiking trail. There are other trails located within this zone. A barbed wire fence was noted along the easterly boundary. No species at risk or provincially important species were noted.

*Issues:*

- Opportunities exist to fire proof/forest health proof overstocked areas through spacing, pruning and disposal of slash in areas of high use ie. rock outcrops and to install benches at locations with good viewing potential.

3. Douglas fir, Western red cedar, Western hemlock with lesser amounts of Big leaf maple, Paper birch and Red alder. This is a mature stand (age class 9) that has a variable density and crown closure. There is evidence of previous logging and a fire history. There are snags and windthrow noted throughout this type. Generally, the stand appears healthy; with little evidence of insect damage noted. Snapped off tops (old) were noted in areas where windthrow had occurred. There is very little understory (trees, shrubs or mosses) noted in this type away from the Lake zone. There is evidence of CMT's (culturally modified trees) and biking/hiking trails. No species at risk or provincially important species were noted.

*Issues:*

- Signage of CMT's and FN cultural significance should be noted (Mount Currie Band consultation required)
- South east corner of type falls into BC Hydro R/W – look at working with BD Hydro on this portion of the 5L42 line to reduce slash loading and install viewing point – great view of community use directional sign to point out Signal Hill and it's FN significance.

4. Douglas fir, Western red cedar, Western hemlock and lesser amounts of Paper birch and red alder. This is an immature stand (age class 4) that has a veteran component of Douglas fir and Western red cedar. There is evidence of a logging and wildfire history There are snags and windthrow noted throughout this type. Generally, the stand appears healthy; with little evidence of insect damage noted. The terrain tends to be gullied and broken and ranges from 0 to 40% and contains no name creek which is fish bearing and has high coho spawning potential at the confluence of the Lake. Skunk cabbage, devil's club and other species found in riparian areas were noted along the creek. Mid to upper slope had little to no understory of coniferous or deciduous stems. Saskatoon, huckleberry (red and black), foam flower and false Solomon seal were common. Lumpy's and other bike/hike trails were noted in this zone. No species at risk or provincially important species were noted.

*Issues:*

- The creek should be sampled for fish bearing potential as it continues on to and past the old access road.
- This old access road can be upgraded and used as the trail head for bikers to keep them off the lakeside trail.

**General Issues:**

- BC Hydro should be contacted regarding slashing on the R/W's located in and around the Park and the community. The potential for receiving sustainability funding from BC hydro should be investigated to create parking area at the north end, access on the south end and a general re-vegetation prescription devised for everything in between. Several native species could be planted that would benefit birds and wildlife and would not grow to be within the limits of approach. This could be a joint effort with BC Rail, MoTH, BC Hydro and VoP.
- The area on the 5L42 should be cleaned up and a rest area installation made.
- BC Hydro slashing creates a fire hazard and a forest health issue that can negatively impact the Park and the surrounding countryside.
- The Wedge-Green SOCA is located just south of the Park boundary. No spotted owls have been found in the SOCA. The Spotted Owl Recovery team is reviewing current management strategies for the SO.

- Goat Winter Range (GWR) polygons are located east and west of the Park. No goats have been noted within the Park.
- Deer frequent the Park and the adjacent areas and there is potential for Ungulate Winter Range areas to be developed on the west side of hwy. 99
- Evidence of moose has been noted near Nairn Falls Provincial Park.
- One Mile Lake – boundary as shown on available mapping is not consistent. We have used the original map supplied by the VoP for the proposal.
- The VoP Official Community Plan (OCP) (Bylaw No. 435, 1999) makes references to One Mile Lake Park. Section 2.2 – Pemberton’s Vision for the Future, Section 2.2.1 -Fundamentals of Vision, references protection of the environment and the improvement of opportunities for recreation. Section 3.1 Land use and Section 3.1.4 - Parks and Recreation references the Trail system and the linkage with One Mile Lake from several key locals within the community. In addition, there are several Policies under this section that involve One Mile Lake Park – as an example #21b) improvements to One Mile Lake Municipal Park, which will remain the community’s major park; #22 - trail system linkage; #25 – the Village will endeavor to develop and maintain One Mile Lake Park in a manner that provides recreation and pleasure opportunities for all Pemberton Valley residents and visitors while recognizing the value of existing flora and fauna.
- The VoP has in the OCP, identified the issue of accessing the Park through Section 3.3. Transportation and Roads, Section 3.3.4 Pedestrian/Cycling Movement and Policy #49 - the Village will collaborate with the MoTH in introducing measures (signage and lighting, for example) to ensure the safety of pedestrians and cyclists using the Highway within the Village. Section 3.4 Areas of Environmental Sensitivity and/or natural hazard One Mile Lake and its surrounding park land has been identified as an area of environmental sensitivity in this Plan for the following reasons: i) lake/fish enhancement program, ii) surrounding marshlands – natural habitat for variety of wild fowl and iii) lake area is Pemberton’s only major municipal park
- Concern for overgrowth of weeds. Collaboration with MoELP and DFO for permitting and best management practices for weed control system should be pursued.
- Opportunity exists for VoP to conduct salvage/harvesting operations within and adjacent to Park under new tenures issues by MoF to reduce fire hazard rating. Harvested timber could be utilized for benches, walkways, signage, etc. (student employment; 2010 employment/training opportunities; community hours, etc.)
- Bike trails - construction should be guided by VoP and bike organizations (Storm BC, PORCA, etc.) The only authorized trail is held under the Sea to Sky Bike Trail Rec. 6042.

**Appendix I**

Bird Sightings (Based on June, 2001 & 2003 One Mile Lake Bird Walks)  
 Conducted with participants from the Annual Breeding Bird Survey, Whistler Naturalists and Pemberton Birders

	2001	2003
Common Loon	✓	
Great Blue Heron	✓	
Bald Eagle	✓	
Spotted Sandpiper	✓	✓
Blue Grouse	✓	✓
Osprey		✓
Merlin		✓
Belted Kingfisher	✓	✓
Canada Goose		✓
Rufous Hummingbird	✓	✓
Pileated Woodpecker		✓
Downy Woodpecker	✓	✓
Northern Flicker	✓	✓
Hammond's Flycatcher	✓	✓
Willow Flycatcher	✓	✓
Alder Flycatcher		✓
Warbling Vireo	✓	✓
Cassin's Vireo	✓	
Northwestern Crow		✓
American Crow	✓	
Raven	✓	✓
Stellar's Jay		✓
Chestnut Backed Chickadees	✓	✓
Black Capped Chickadees	✓	
Red Breasted Nuthatch	✓	✓
Brown Creeper		✓
Winter Wren	✓	✓
Robin	✓	✓

	2001	2003
Swanson's Thrush	✓	✓
Cedar Waxwing	✓	✓
Red-eyed Vireo		✓
Warbling Vireo	✓	✓
Golden Crowned Kinglet	✓	
McGillivray's Warbler	✓	✓
Townsend Warbler	✓	✓
Yellow Warbler	✓	✓
Yellow-Rumped Warbler	✓	
Common Yellow Throat Warbler		✓
Orange Crowned Warbler	✓	✓
American Redstart	✓	✓
Red Winged Blackbird	✓	✓
Brown Headed Cowbird	✓	✓
Western Tanager	✓	✓
Song Sparrow	✓	✓
Chipping Sparrow	✓	
Spotted Towhee	✓	✓
Pine Siskins	✓	✓
Grosbeak	✓	✓
Dark eyed Junco	✓	
Purple Finch	✓	
Tree Swallow	✓	
Violet Green Swallow	✓	
Band tailed pigeon	✓	
Vaux's Swift	✓	

Appendix II  
BIRDS OF ONE MILE LAKE

Dr. Nigel Mathew, a local medical doctor and avid birder, has recorded the following 118 species of birds within 100 m of One Mile Lake or flying over the lake.

- |                     |                           |                                |                          |
|---------------------|---------------------------|--------------------------------|--------------------------|
| -Common Loon        | -Least Sandpiper          | -Common Raven                  | -MacGillivray's Warbler  |
| -Pied-billed Grebe  | -Western Sandpiper        | -American Tree Swallow         | -Wilson's Warbler        |
| -American Bittern   | -Wilson's Snipe           | -Violet-green Swallow          | -Common Yellowthroat     |
| -Great Blue Heron   | -Glaucous-winged Gull     | -Northern Rough-winged Swallow | -Western Tanager         |
| -Tundra Swan        | -Rock Dove                | -Barn Swallow                  | -Spotted Towhee          |
| -Wood Duck          | -Great Horned Owl         | -Black-capped Chickadee        | -Chipping Sparrow        |
| -Gadwall            | -Barred Owl               | -Chestnut-backed Chickadee     | -Savannah Sparrow        |
| -American Widgeon   | -Northern Pygmy Owl       | -Bushtit                       | -Lincoln's Sparrow       |
| -Mallard            | -Black Swift              | -Red-breasted Nuthatch         | -Song Sparrow            |
| -Northern Pintail   | -Vaux's Swift             | -Brown Creeper                 | -White-crowned Sparrow   |
| -Green Winged Teal  | -Rufous Hummingbird       | -Winter Wren                   | -Golden-crowned Sparrow  |
| -Ring-necked Duck   | -Belted Kingfisher        | -Marsh Wren                    | -Dark-eyed Junco         |
| -Lesser Scaup       | -Red-breasted Sapsucker   | -American Dipper               | -Black-headed Grosbeak   |
| -Bufflehead         | -Downy Woodpecker         | -Golden-crowned Kinglet        | -Red-winged Blackbird    |
| -Barrow's Goldeneye | -Hairy Woodpecker         | -Ruby-crowned Kinglet          | -Yellow-headed Blackbird |
| -Turkey Vulture     | -Northern Flicker         | -Veery                         | -Brewer's Blackbird      |
| -Osprey             | -Pileated Woodpecker      | -Swainson's Thrush             | -Brown-headed Cowbird    |
| -Golden Eagle       | -Olive-sided Flycatcher   | -Hermit Thrush                 | -Bullock's Oriole        |
| -Bald Eagle         | -Western Woodpeewee       | -American Robin                | -Pine Grosbeak           |
| -Northern Harrier   | -Least Flycatcher         | -Varied Thrush                 | -Purple Finch            |
| -Sharp-shinned Hawk | -Alder Flycatcher         | -Gray Catbird                  | -House Finch             |
| -Cooper's Hawk      | -Willow Flycatcher        | -European Starling             | -Red Crossbill           |
| -Red-tailed Hawk    | -Hammond's Flycatcher     | -Orange-crowned Warbler        | -Pine Siskin             |
| -American Kestrel   | -Pacific Slope Flycatcher | -Nashville Warbler             | -American Goldfinch      |
| -Merlin             | -Ducky Flycatcher         | -Black & White Warbler         | -Evening Grosbeak        |
| -Ruffed Grouse      | -Cassin's Vireo           | -Yellow Warbler                | -House Sparrow           |
| -Blue Grouse        | -Warbling Vireo           | -Blackpoll Warbler             |                          |
| -Sora               | -Red-eyed Vireo           | -Yellow-rumped Warbler         | 118 species              |
| -American Coot      | -Gray Jay                 | -Black-throated Gray Warbler   |                          |
| -Spotted Sandpiper  | -Steller's Jay            | -Townsend's Warbler            |                          |
| -Killdeer           | -American Crow            |                                |                          |

## APPENDIX B - NOTES FROM MEETING WITH HIGHWAYS DEPT.

Meeting with Rob Bitte and Jim Heagan

1. Access must be controlled at cattle grid – there used to be a gate there. They do not want vehicular access to a future parking lot, want gate replaced. Whose land is it?
2. We could use a 4-legged intersection at the tennis courts instead but the stacking lanes have to be 90 to 120 m in length and that would reach the bridge. The bridge is not wide enough and would have to be re-built. Highways does not want any turning in the bend area. Traffic already has problems with the sight lines.
3. Pathway at edge of lake
  - could do a retaining wall below the highway
  - be aware that this area may need improvements by Ministry of Transportation and Highways (MoTH)
  - be aware that when MoTH does anything they can do whatever makes the most sense in terms of safe traffic flow
  - however, if something is already in place MoTH may help to fix it up!
4. Any structure below the bank will get snow throw in winter therefore not a good place for the boat house.
5. There is a small bench below the road at the low spots for possible path or retaining
6. Cannot really move the no-posts very much They must sit on asphalt and they are .5m width at the bottom and they must sit 1.8m off the white line.
7. No-posts must continue in front of the boardwalk access. It is not safe to have people walking on the road edge with no barriers.
8. Access from the highway would work well between the bend at the top of the hill and the next pylon. There is room for turning in both directions, room for a passing lane and a stacking lane and the grades are quite reasonable. We need to contact Hydro for permission to cross their right of way. It is Crown Land with a Hydro easement. Need the pylon numbers.

# APPENDIX C - NOTES FROM MEETING WITH STAKEHOLDERS

## Attendees

Bryan Kirk  
Hillary Downing  
Hugh Fisher  
Rod MacLeod

Michelle Beauregard  
Lynda Chandler  
Wanja Twan  
Allen McEwan

Hedley Crowther  
Brenda Williams  
Liz Jones  
Hugh Naylor

Myson Effa  
Martin Dahinden  
Judith  
Bernice

## ISSUES IDENTIFIED:

Conflicts between boat users / park users

Lake levels increasing due to beaver activity

- PWA monitoring beaver dam

Access to park – need to be able to drive trailers down to the lake

- Open up old outlet road?
- Moving no post along highway

Old Douglas Fir - hazard for rope swingers

Islands in the lake – not getting bigger  
spongy surface  
hard rock predominantly

Trail around lake – repair and rebuild

- Restrict bikes to upland / trails
- Keep certain activities restricted
- Limit bike use

Signage an issue

Dog feces – health issues

- Fencing in spawning channel area to restrict dogs

Outlet creek / beaver activity – lots of problem

Weeds / lily pads / pond weed

- the pond weed does not seem to be migrating out
- the green lily pads are expanding and spreading
- no Eurasian milfoil seen
  - Windmill / turbine provide oxygen and circulation to the water – Okanagan Lake - cold dense water @ bottom
  - dredging / aeration
  - Spirea – replace with native species

## NEEDS AND WANTS:

1. Boathouse / Boat storage near outhouse – size of a 2-car garage / Boat storage at old exit
  - Built for multi-use
  - Change rooms / - incorporate a change room facility
  - Needs to be secure
  - Lighting in facility (natural light)
  - Carrying boats through the beach area - problematic
  - Restrict access at the site of the outhouse
  - Gate access for boaters
2. Enhance current swimming area / Enhance east swimming hole & extend boardwalk out into the lake.
  - Add several loads of sand to extend beach area out for ~ 100'
  - Solar outhouse x 2
  - Doggy beach
3. North Side of park – PWA desire to leave it natural.
4. Parks expansion – Community Forest  
What is it? What should it be?
  - our beach
  - dog walking
  - paddling
  - birding – benches
  - interpretive signs
  - bikes - where?

## APPENDIX D - LIST OF STAKEHOLDERS

Dr. Hugh Fisher .....	Dragon Boat Team
Christopher Nicholson .....	Pemberton Canoe Club
Randy Symons .....	Parks & Trails Maintenance Supervisor, Whistler
Hugh Naylor / Lisa Helmer .....	Fisheries DFO Pemberton Valley
Allan McEwan.....	Pemberton Wildlife Association
Liz & Jonny Jones .....	Outdoor Learning at One Mile Lake and Lil'Wat Fisheries Commission
Mike Milner .....	Birken School
Dolores Los .....	Cross Country Ski Group (Signal Hill School)
Brenda .....	Pemberton Riding Club
Dudley Kennet / Steve Anderson / Bob Menzel .....	Trail Riding business in Pemberton
Liz and Jonny Jones.....	Lil'Wat Fisheries Commission
Bernice Patterson.....	Arborist and forest Eco-Systems
Michael Rosen.....	Long Range Planning & Demographics
.....	Salmonid Enhancement
Ron Bitte .....	Ministry of Transportation and Highways
Jim Heagan .....	Ministry of Transportation and Highways
BC Hydro	
CN/BC Rail	
George Underhill .....	Neighbour
Serge Cote .....	Neighbour & Developer
Steve Olmstead .....	Director of Planning, SLRD
Jordan Sturdy .....	Chairman, Pemberton Valley Dyking District
Sheldon Tetrault.....	Mt. Currie
Stephanie Coughlin .....	Recreation Committee
Bob Kusch .....	Manager, Program Svc. & Community Liaison, Whistler
Gary Charland .....	Pemberton Resident
Mayor and Council .....	Village of Pemberton
Brian Kirk.....	Pemberton Village Administrator
David Allen .....	Manager of Utilities, SLRD
Hedley Crowther.....	Village of Pemberton Superintendent of Public Works

## APPENDIX E - PROJECT TEAM PROFILE

Judith Reeve, BCSLA, CSLA ..... Project Co-ordination and Design  
Landscape Architect  
Principal - Judith Reeve Consultants Ltd.

Tom Annandale, AIBC, AIC..... Project Administration and Design  
Architect  
Principal - Toby Russell Buckwell & Partners Architects

Bernice Patterson, RFT ..... Biophysical Analysis, Planning and Reporting  
Principal - B&B Forestry Limited  
A Natural Resource Planning & Management Company

Liz Jones, BSC Geology ..... Biophysical Analysis (with B&B Forestry)  
Principal - Jones Consulting  
Natural Systems Analysis & Planning

Juanito Gulmatico..... Design Graphics  
Toby Russell Buckwell & Partners Architects

Heather Jeal ..... Presentation Graphics and Report Production  
Principal - Going Coastal Communications Group

### ***Resource Persons to the Team:***

Mayor Elinor Warner  
Councillor Michelle Beauregard - Chair, Parks & Recreation  
Councillor Richard Doucet  
Bryan Kirk, Administrator - Village of Pemberton  
Sheena Fraser, Assistant Administrator - Village of Pemberton



