

# Haley Lake

British Columbia

Ecological Reserve 117

Warden Report - 2021

Records of work and site visits by ER Wardens Hugh Macdonald, Amy McGarrigle and Blossom Macdonald

With Appendices including

- Tools and important items
- Recommendations
- Selected photos
- Location of the Reserve
- Elements of management



## Table of Contents

	Cover - Haley Lake Ecological Reserve 117
2	Table of Contents
3	Site visits in 2021
4	Site visits in 2021 (cont'd)
5	Site visits in 2021 (cont'd) - Conclusions
6	Appendix 1 - Tools and Important Items (list)
7	Appendix 2 - Recommendations
8	Appendix 2 (cont'd) - Recommendations
9	Appendix 3 - Recommendations: Communications
10	Appendix 4 - Recommendations: Background and Logistics
11	Appendix 4 (cont'd) - Recommendations: Background and Logistic
12-17	Appendix 5 - Haley Lake Ecological Reserve: selected photos from the 2021 ER Warden site visits
18	Appendix 6 - Location
19	Two fundamental elements governing management of Haley Lake Ecological Reserve
20	Acknowledgements



Ecological Reserve	117 - Haley Lake			2021 Warden Report
Wardens on site visit:	Hugh Macdonald	Amy McGarrigle	Blossom Macdonald	Page 3 of 20
Estimated Volunteer Hours:	Total:	about 85 hrs	Onsite:	about 12 hrs (includes travel)

#### Site visits in 2021

- One of the Wardens (Hugh) gained membership in the Island Rangers Society in the Spring of 2021 after waiting almost two years
  - Membership in the Society eases many of the access difficulties that are barriers to being an Ecological Reserve Warden at Haley Lake ER
  - Hugh completed the required procedural and protocol training with Island Rangers Society in June
- We were not able to co-ordinate a site visit with BC Parks staff until October
  - BC Parks staff have quite a substantial workload in the Summer and early Fall
  - The Mosaic lands were closed for a significant part of July-September due to high fire hazard ratings
  - One of the BC Parks Rangers (S. Megyesi) arranged short term loan of a Parks' VHS radio thus enabling us to enter the Mosaic lands unaccompanied in the Fall.
- Two ER Warden site visits in 2021 - Oct 3 and Oct 23
  - We took photos of the landscape, vegetation, fauna and features, especially in the area around the small water hole on the northwestern ridge above Haley Lake. This water hole appears to remain wetted throughout the warm season providing easy access to water at the high elevations of the ridges above Haley Lake. We periodically visit this water hole to observe pond life and signs of various creatures using the area.
  - We used our own All-Wheel-Drive car to get up to the Reserve on our first trip (October 3).
    - There is one very rough section that was quite difficult to pass in a car. We made it up without incident, but bottomed out quite loudly once on the way down. I think this actually broke part of the exhaust system heat shield loose under the car.
  - On the second trip we drove up in our car to a parking area not far below that rough section then transferred to the BC Parks truck.
    - The BC Parks truck was a proper 4x4 pickup crew cab style truck.
    - We encountered a couple of smaller diameter trees down across the roadway. We were able to move one and cut through another.
    - COVID-19 protocols were carefully followed on all visits.

Ecological Reserve	117 - Haley Lake		
Wardens on site visit:	Hugh Macdonald	Amy McGarrigle	Blossom Macdonald

### Site visits in 2021

- October 3, 2021
  - Our first visit of 2021 was just us, 3 Wardens; Hugh, Amy and Blossom. We observed bears in two groups foraging on the far east face of the northwest ridge above Haley Lake. One group was a sow and a cub high on the ridge in a small upper meadow. The other was a single bear that I thought may be a boar. This animal was an estimated 400m away. The sow and cub were about 350m away from the lone bear and perhaps nearly 100m of elevation above it.
- We also recorded several fungi, beetles, ants, plants, flowers, bugs, lichens and a grasshopper
  - many of the observations are now recorded in the iNaturalist.ca web application.
- October 23, 2021
  - Our second visit of 2021 included two BC Parks Rangers, S. Megyesi and E. Swan, who have Haley Lake in their administrative area.
  - This visit was much wetter than the first, although we were lucky both times to have good visibility and not get fogged in. The Reserve is subalpine and fog can move in quickly reducing opportunities to make observations and presenting serious safety risks.
  - During this trip we hiked to the northwest of the ridge to have a look at the water hole. It had filled to the vegetation line around it.
  - We did see some signs of ungulates in the vicinity of the water hole but we didn't see any animals.
  - We did not see marmots on either visit.
  - Most of our observations are now recorded in the iNaturalist.ca web application.
- Additional visits
  - Two more attempts to get to Haley Lake ER were made in 2021 - both in December
    - both attempts were blocked at low elevation by snow cover
    - for the first attempt it was only possible to get about 3.5 km in from the main gate
    - we got to about the 6 km point from the main gate on the second attempt

Ecological Reserve	117 - Haley Lake
--------------------	------------------

Wardens on site visit:	Hugh Macdonald
------------------------	----------------

Amy McGarrigle
----------------

Blossom Macdonald
-------------------

## Site visits in 2021

### • Conclusions

- We didn't encounter snow on either trip in October, 2021. We were probably only a week or two ahead of the first snowfalls.
- It was great to have the BC Parks Rangers with us on the second trip. Not only did it save having to beat our car up in the rough sections of the road, it saved us a strenuous hike as well.
- It was also really great having the Rangers with us on the second trip because of the shared experience and our ability to provide continuity and familiarity with the area and the sites visited.
- It was good to have the additional personnel working as a team to help make more and better observations and provide additional safety.
- I believe one of the Rangers, S. Megyesi, was able to visit the Reserve earlier in the season accompanying members of a Marmot Recovery Foundation team.
- Based on our current knowledge of the areas of the Reserve we have seen so far and based on anecdotal evidence this area has cougar, bear, elk, deer, and is likely to have wolf populations as well.
- We saw a couple of harebells flowering in early October.

List of important items necessary for working safely and effectively at Haley Lake ER. Asterisks mark essentials.

*	Radio (Forestry, Parks, Mosaic, etc. channels), charged and ready
*	cell phone (GPS, communications, camera), charged and ready
*	compass (basic analog version like Silva)
*	good quality headlamp, charged and ready
*	1st aid kit - personal
*	clean good all-weather clothing to allow layering
*	good quality backpack (preferably waterproof)
	binoculars
*	drinking water
*	2-way radio channel frequency cross reference information
*	whistle
*	effective transportation (some very rough roads)
	winch (on motor vehicle)
*	Spare power for at least the following items
*	<ul style="list-style-type: none"> <li>2-way radio</li> </ul>
*	<ul style="list-style-type: none"> <li>cell phone (power pack, cable, etc.)</li> </ul>
*	<ul style="list-style-type: none"> <li>head lamp</li> </ul>

*	pepper (bear) spray
	rope
	species ID sheets
*	disinfectant to mitigate biohazards (cleaning boots)
*	leather gloves
*	good hiking boots
*	face mask (COVID protocols compliant)
*	UV protection (glasses, sunblock, etc.)
*	food
	gaiters
*	knife
	Training in at least the following
*	<ul style="list-style-type: none"> <li>Nanaimo Watershed course</li> </ul>
*	<ul style="list-style-type: none"> <li>map reading</li> </ul>
*	<ul style="list-style-type: none"> <li>2-way radio operation</li> </ul>
*	<ul style="list-style-type: none"> <li>compass and gps</li> </ul>
*	<ul style="list-style-type: none"> <li>wilderness 1st aid</li> </ul>

Additional equipment, materials and goods very valuable to have

	GPS			hatchet
	large plastic garbage bag(s)			pruning saw (folding or retractable)
*	waterproof cell phone bag(s)			methyl alcohol in safety container (sterilize tools, wounds, etc)
	waterproof stuff bags		*	waterproof matches
	full change of clothes		*	flashlight or 2nd headlamp, charged and ready
	chainsaw, Personal Protective Equipment, tools, fuel and oil.		*	multi-tool



## Recommendations to better empower and support Ecological Reserve Wardens of Haley Lake ER

Item	Recommendation
Wilderness 1st Aid	We recommend Wardens find training to suit their needs, that BC Parks pay for the training and pay for Wardens to recertify before the ticket expires. Wilderness first aid is a valuable asset for Wardens working at this Reserve. Certifications usually last 3-4 years.
Watershed Passes	We recommend watershed passes 5599 (Amy) and 5600 (Hugh) be properly recorded and represented with cards identifying the bearer and pass number. Nanaimo Watershed (Jump Lake watershed) requires a training course to certify and a pass to enter the area because the main access to Haley Lake ER is through the Watershed. There is no cost for the watershed pass but the course is required. Amy and Hugh are certified. The watershed pass is also a requirement for Island Ranger Society access.
Orienteering	Orienteering skills (GPS operation, map reading, compass use, terrain and hazard evaluation) are valuable skills - each of the Wardens already have effective levels of proficiency. The current Wardens will continue with self-directed learning. We recommend as additional training becomes available that it be offered to Wardens at no cost to them.
Mountain Survival	Survival skills (mountain) training is important for this ER. Currently Wardens are pursuing self-directed training. We see this type of training as consistent with orienteering skills and wilderness first aid training. We recommend as training becomes available that it be offered to Wardens at no cost to them.

## Recommendations to better empower and support Ecological Reserve Wardens of Haley Lake ER

Item	Recommendation
Island Ranger Society Membership	<p>We recommend BC Parks assist ER Wardens by ensuring membership the Island Ranger Society. Membership in the Society is essential for Wardens' access to the Reserve.</p> <ul style="list-style-type: none"> <li>● Island Rangers Society members must: <ul style="list-style-type: none"> <li>○ use a specific Island Ranger Society booking system to pre-plan trips;</li> <li>○ use specific vehicle markings and insignia;</li> <li>○ follow specific rules while within the Mosaic Forest Management lands;</li> <li>○ follow Observe, Record, Report protocols while within Mosaic Forest Management administered lands.</li> </ul> </li> </ul>
Access Requirements and Costs	<p>We recommend BC Parks help Wardens by helping offset costs for access and equipment. To maintain effective site access the Island Ranger Society requires the following things.</p> <ul style="list-style-type: none"> <li>● paid membership in Island Rangers Society (\$100-\$150 annually as of 2021)</li> <li>● special equipment and training (additional costs) includes: <ul style="list-style-type: none"> <li>○ VHF radio with correct channels (\$300 to \$600 approx. buy and set-up cost);</li> <li>○ Nanaimo Watershed pass (no cost at this time);</li> <li>○ various gate keys, cards and/or actuation fobs (require repayment in the event of loss, and/or deposit);</li> <li>○ various vehicle insignia (no cost at this time).</li> </ul> </li> </ul>



## Recommendations to better empower and support Ecological Reserve Wardens of Haley Lake ER

Item	Recommendation
Liaison with BC Parks and Marmot Recovery Foundation	<p>The Wardens recommend all protocols such as biosecurity, fire closures, wildlife-human conflict informations, etc., be posted at a place, such as the Friends of Ecological Reserves website, easily accessible to all parties.</p> <p>Teamwork is critical to access, safety and ecological integrity of Haley Lake ER. There are currently three Wardens. Teams made up of various representatives from the Marmot Recovery Foundation, Wardens and BC Parks in all combinations make the most sense for direct entry to the Reserve.</p> <p>We recognize BC Parks and the Marmot Recovery Foundation (our partners) staff have many projects and Protected Areas to attend to. The Wardens will, from time to time, travel to the ER without partnered staff. Nonetheless, the Wardens always hope to include BC Parks and/or Marmot Recovery Foundation staff whenever possible. Also, we are glad if our partners are able to invite us to accompany them to the ER whenever possible.</p> <p>The Wardens always strive to provide our partners with timely notice of intention to enter Haley Lake Ecological Reserve. Communications must necessarily not be limited to a single medium. Texting, email, telephoning or other types of communication can be expected. Also, due to staff changes over time it may not be possible to maintain an established contact person in each partnering organization. The partners need to remain flexible and ensure continuity of communications over time.</p>

## Recommendations to better empower and support Ecological Reserve Wardens of Haley Lake ER

Item	Recommendation
Accessibility	Inaccessibility is the main difficulty for Wardens of Haley Lake Ecological Reserve.
Getting to the ER	<p>Without membership in the Island Ranger Society it is not possible to get gate cards, keys, electronic fobs or access codes needed to cross private forest lands surrounding Haley Lake ER. This is why we make the recommendation to support Warden membership in the Island Ranger Society.</p> <p>Travelling the road network requires having and using 2-way radio systems. The licencing and equipment are expensive and unauthorized use is prohibited. The road network itself presents difficulties such as lack of maintenance, active work areas, deactivated roads, storm damage, washouts or mass wasting events, very steep hills, and some very rough sections.</p> <p>The current access model works even though it is restrictive. Most of the restrictiveness results from having five stakeholders that must "handshake" in order to access the Reserve. The Wardens will often have to co-ordinate with BC Parks, the Marmot Recovery Foundation, Island Rangers Society and Mosaic Forest Management to get to and from Haley Lake ER.</p>

## Recommendations to better empower and support Ecological Reserve Wardens of Haley Lake ER

Item	Recommendation
<p>Accessibility</p> <p>Human Impact</p>	<p>We recommend BC Parks work with Wardens and other stakeholders to identify and categorize avenues and methods of human entry to the vicinity of the Reserve. Roads may penetrate the Reserve boundaries on all sides. We hope to explore the road networks for access points over the next few years.</p> <p>Reducing human presence and keeping effective biohazard mitigation protocols in place can help slow human impacts. Warden presence helps monitor human impact and maintain and preserve the integrity of the Reserve.</p> <p>The landscape surrounding Haley Lake Ecological Reserve is subject to significant change over time resulting from ongoing resource extraction activities. At this time Haley Lake is thought to be mostly inaccessible by on-road vehicle except through the Nanaimo Watershed (Jump Lake Main). However, the private forest companies continually close and re-open areas to harvest. As a result old roads may get opened up again, others closed, and new roads may be built.</p> <p>Aside from Jump Lake Main there are three other areas where people may get access to the vicinity of the Reserve. The west side of the Reserve may be accessible from roads leading up from the Nitinat River valley. Road networks in the Nanaimo River valley may access to the vicinity of the northern boundaries. The southern boundaries may be reached via road networks from the north shore of Cowichan Lake.</p>



Appendix 5: Haley Lake Ecological Reserve, selected photos from the 2021 ER Warden site visits.



















Haley Lake Ecological Reserve (approximate position circled in red, below) is located in the southwestern mountains of the Nanaimo Lakes valley, about 50 km from Nanaimo.





## Two fundamental elements govern management of Haley Lake Ecological Reserve

- Ecosystems management
  - conservation of Vancouver Island marmots in support of the Marmot Recovery Program
  - protection from invasive species by learning, knowing, developing and following protocols to reduce the chances of introducing alien or invasive species
  - learning, knowing and continually improving knowledge of ecosystems, ecosystem management, adjacent land uses and species management
  - gathering, cataloguing and analyzing data
  - reduce human activity in the Reserve
- Safety management
  - ensure safety protocols are known and followed when accessing the Reserve
  - training and practical understanding of first aid, and human-wildlife conflict in remote and wilderness settings

# Acknowledgements

## **Photo Credits**

All photos by ER Wardens Hugh Macdonald, Amy McGarrigle or Blossom Macdonald.

## **Empowerment and recognition**

Thank you Vancouver Island Marmot Recovery Foundation for all the great work as team leaders. Thank you to BC Parks Arrowsmith Area Ranger staff and Ecosystems Section Head for keeping the connections happening and for working to ensure ER Warden inclusion.

## **Recognition**

Erica McClaren, regional and headquarters staff - Thanks for doing great work for ER's and advocating for ER Wardens' success.

To all ER Wardens and Friends of Ecological Reserves - simply a big thank you for all the work you do.

Thank you to all the folks, all you pathfinders, who fought so hard; who were and are instrumental in creating the huge array of protected areas in British Columbia including our Ecological Reserves.