Forest History of the Seymour Watershed

A Walking Tour

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Abstract

The following pages represent a walking tour that looks into the forest history and resource management of the Seymour Valley from the 1880’s to the present. This area has changed immensely as a result of the increased population of the Lower Mainland of Vancouver through immigration and development. Logging companies looked to log timber resources for building materials and global export. This provided North Vancouver with a lumber industry and development of its own city. Timber exploitation as a result of unlimited and unregulated forest practices are discussed, as well as the realization of precious watershed resources. This relates to the changed logging and forestry management practices on the landscape, with the Crown lands lease in 1927 to a renewed Amending Indenture in 1967. The watershed landscape also influenced forestry practices that were allowed in the area. Today, the Lower Seymour Conservation Reserve has come a long way from being an unmanaged unregulated landscape to a carefully managed municipal park that has trails and tours open to the public. This material is further arranged in the most straightforward and easy to follow manner in order for the public to enjoy as it will be implemented into a walking tour (Figure 1) that encircles the Rice Lake Loop Trail.
Forest History of the Seymour Watershed: A Walking Tour

First Stop: Gazebo at Rice Lake Gate

Hello everyone, welcome to the Lower Seymour Conservation Reserve! I will be guiding you on a tour that will inform you about the forest history of the Seymour Valley. Before I begin, it is important to acknowledge that long prior to European settlement, there were First Nations\(^1\) that lived in the area all along, and they used the abundant resources of fish and forest in the landscape to support their livelihood.\(^2\) I want you all to imagine what the area was more than 100 years ago, as early as the 1880’s. At that time, this entire area was covered in with forests and was complete wilderness. Despite this perceived wilderness, there was ongoing logging from private owners because the area was split into various ownerships under district lots, and there was constant disagreement and claims on land rights to access the resources between them, the city and the water district.\(^3\) As a result of this, there have been altered land use practices through time that has led to an eventual opening of the area of public access as a municipal park as we know it today. Understanding the history of resource use in the Seymour Valley will allow us to recognize how much of an imprint our society has left on this particular west coast forest as a result of the realized resources it can provide us.

Second Stop: Enter the Lynn Headwaters connection trail behind the Learning Lodge. (Make sure people get a bathroom break before as the tour is long). Stop near end of fenced area on the right side along Lynn Headwaters Connection trail.

Logging was ongoing in this area during the 1880s. This was a result of the enormous population growth paired with limited timber resources as a result of the building of the Canadian Pacific Railway to Vancouver.\(^4\) Logging companies were looking farther inland for

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\(^1\) Kahrer, G. (1988) *Logging and landscape change on the north shore of the Burrard Inlet, British Columbia, 1860’s to the 1930’s*. (Doctoral Dissertation) Faculty of Graduate Studies, Department of Geography, University of British Columbia. [Hereafter Logging and landscape change on the north shore]


\(^3\) Kahrer, G. (1989). *From speculative to spectacular: the Seymour River valley, 1870’s to 1980’s: a history of resource use*. Parks Department, Greater Vancouver Regional District, Burnaby, B.C. [Hereafter FSTS]

more timber resources for their mills and building material. In particular, a mill called Royal BC Planing Mills, had been granted a 21-year lease of a large land area that was around 1,140 acres between Lynn and Seymour Rivers, including the area surrounding Rice Lake at a price of 10 cents a year. The prices for these land leases did not stay at that rate and increased over time.

The general attitude towards timber harvest involved unrestricted resource use, because logging companies did not know of the sustainable and careful considerations involved in management of forests today. At this time, the method of logging was selective logging, where Western Red cedar (Thuja plicata) trees were chosen one by one out of the forest and cut down. These cedar logs tended to have had a straight grain pattern and few knots so that they could be easily split up. Logs were then carried on rough skid roads (Figure 2), where logs were laid down parallel to one another with horses or oxen pulling the load. The major mill in 1887 was the Hastings Shingle and Manufacturing Company owned by Robert and James McNair.

Gold was also discovered in 1888 along the Seymour Creek, and there was a mine created about 2.5 miles up from the river. This had connections to the larger gold mining boom in the interior of British Columbia, with many prospectors arriving to the area to seek their fortunes.

**Third Stop:** Make a left at the fork in the road where there is a post directing towards Rice Lake. Enter the trail here and make a stop beside the model flume line. Point out some of the stumps remaining in the area.

Looking behind me here, you can see an example of a 36 foot flume line reconstructed by the staff here at the Lower Seymour Conservation Reserve (Figure 3). The flume line was

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6 Kahrer, 1989, FSTS.; Kahrer, 1988, *Logging and landscape change on the north shore*. Lease of land originally provided 30 years lease, but was later changed to be only 21 years to encourage investment back to the land in the form of manufacturing companies.
9 Ibid; Ibid
10 Gundersen, F. (1980). *The rise and fall of the forest industry of the north shore of Burrard Inlet between Capilano and Seymour Rivers.* (Unpublished doctoral dissertation). Faculty of Forestry, University of British Columbia. [Hereafter the rise and fall]
11 Kahrer, 1989, FSTS.
essentially a water canal used to transport shingle bolts. Shingle bolts were blocks of the Western Red Cedar tree species that were four to seven feet in length.\textsuperscript{14} A flume line was built in 1902 by the Hastings Shingle Manufacturing Company, and it stretched an incredible distance of 16 kilometers down to the Burrard Inlet (\textit{Figure 4}).\textsuperscript{15}

By the 1890s, a lot of the land was taken up by settler pre-emption and private ownership, but a majority of the timber sources available in the Seymour Valley were under the management of the Hastings Shingle Manufacturing Company. Selective logging of cedar was done by using springboard logging, where loggers would climb above the large rooted area of the cedar on planks (\textit{Figure 5}).\textsuperscript{16} They would use crosscut saws or double bladed axes to cut the base of the tree above the root to bring the tree down with a crash! Cedar was chosen because it was considered durable, strong and easy to cut into the size they required. Since a lot of tree rot would occur in the center of the Cedar, shingle bolts were taken from the exterior of the cedar tree. They were then cut up and then sent down to the shingle mill at the Burrard Inlet on the North Shore of Vancouver not only for rooftop and building construction as shingles,\textsuperscript{17} but also for export\textsuperscript{18} around the world in 17 different shipping vessels.\textsuperscript{19}

There was also logging of Yellow Cedar (\textit{Chamaecyparis nootkatensis}) to the northern mountainous region by the shingle company, and they would dump these logs into the Seymour River, where they could be retrieved in the Burrard Inlet for transport to lumber mills. However,

\begin{thebibliography}{9}
\bibitem{Kyler1997} Kyler, 1997, History of Forest Resource; City of Vancouver Archives [Hereafter CVA], Hastings Sawmill Company Fonds, File 13.
\bibitem{Smedman2004} Smedman, L. (2004, August 5) Secrets of the woods, \textit{The Vancouver Courier}.
\bibitem{Kahrer1988} Kahrer, 1988, \textit{Logging and landscape change on the north shore}.\footnote{Draycott, W. M. (2000). \textit{Early Days in Lynn Valley}. Contact Printing and Mailing Ltd. North Vancouver, B.C. Before the Hastings Sawmill and Manufacturing Company was established in 1870, it was called the Stamps Sawmill; According to the British Columbia Mills Timber and Trading Company, it was the largest corporation in the province in B.C., it owned and operated processes in the Hastings Sawmill, Royal City Planing Mills in both Vancouver and New Westminster. Of them, The Hastings Sawmill was one of the largest mills that operated on the Vancouver waterfront.}
\bibitem{CVA2013} CVA, H.Sawmill Company Fonds, File 13, B.C. Mills Timber and Trading.
\end{thebibliography}
this resource ran low and the logging of that region was halted because of the yellow ring rot, a bacterial growth on the trees.20

**Fourth Stop: stop at a small boardwalk that reaches out to Rice Lake**

From 1908 to 1912 the Burrard Inlet Railway and Ferry Company21 considered building a railroad that crossed over the Seymour River area to transport lumber and metal ores because of the spike in mining at the time.22 This obviously did not occur because of the absence of a railroad track at the present.

Rice Lake as seen here was used as a holding pond to store shingle bolts (*Figure 6*). The lake was also used as a water source from 1906 to 1912 to provide water for the flume line to transport shingle bolts downstream to the mill. Logging to this time was very unregulated and involved a simple claim on the land that allowed one to log, and logging camps were also set up on the east bank of the Seymour River to the east side.23

By the 1900s, there were a lot of settlers in the Seymour Valley near Rice Lake, with records of ranches,24 bunkhouses, and houses.25 Approximately 60 men would be working at the Shingle Bolt Camp near Rice Lake, and larger camps on other sites of the Seymour Valley would employ up to 200 men.26 Man power was required because of the steam-operated sawmills that were used to saw up the Western Red Cedar into shingle bolts.27 The flume line also needed to be loaded up with the shingle bolts to run down to the Burrard Inlet. The ethnicity of the loggers working at the camps were Europeans, but loggers of a Chinese, Japanese and East Indian backgrounds also felled trees and worked in shingle and sawmills.28 The Asians were paid less

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21 Ibid
23 Ibid
24 Kyler, 1997, History of Forest Resource.; Kahrer. 1989, *FSTS*. Scot’s Ranch is one of the ranches mentioned, but is now torn down, with not much trace evidence of its existence.
26 Ibid
28 Smedman, 2004, August 5, Secrets of the woods, *The Vancouver Courier*. 
due to anti-Asian sentiment, and some were even prevented from purchasing a logging license to log crown or public land timber. However, evidence of well-off entrepreneurs purchased the forest land themselves, and set up less wage excluding logging camps, found in Nikkei or Japanese immigrant logging camps (Figure 7).29

Fifth Stop: Continue walking and stay on the left side of the trail till you reach the U shaped dock area where fishing is permitted.

In 1905, there was growing concern for the domestic supply of water for the city, as the Capilano River was already used as a water resource, but the growing population in the lower mainland of Vancouver demanded more water to supply their needs. As a result of this, Mayor Buscombe saw the Seymour River as valuable water resource after there was a survey on the Seymour River.30 In 1906, crown lands in the Seymour Valley were placed under reserve by the B.C. government under a 999-year lease, but this did not provide control over already established private ownership on the land, with timber and mining claims still valid and practiced in the area.31 However, the government paid the B.C. Electric Company $18, 200 to obtain ownership of the land around Rice Lake and prevent permanent settlement in the vicinity. They also created “North Vancouver City Incorporation Act” in 1906, which protected the water system of Lynn Creek and Rice Lake, giving the land rights to the district municipality water system.32

This led to the construction of a wooden intake pipe in 1907 in the the Seymour River that was made of fir, a tree species that was sturdy, with a pipeline road also built for easy access and maintenance.33 This road was built near the Seymour Creek in order to have an additional supply

29 Ibid; North Vancouver Museum and Archives, Nikkei History Research, 26-19E-7. The Nikkei logging camps were paid well at 25 cents for every cord of shingle bolts that they gathered. File 11 mentions how board and food was included in the camps. File 8 discusses how Kaz Koto, Tosaku’s son, followed his father to the shingle bolt camp and experienced how tiring it was to pack shingles for 10 hours a day.
31 Ibid
32 North Vancouver Museum and Archives, City of North Vancouver Fonds, Clerk’s Correspondence 1911-1914 Subseries, 20-2-1-4-25, John G. Farmer to District Municipal Office W.E. Burns, March 23rd, 1914.
33 Kahrer. 1989, FSTS. In 1907, the Vancouver Waterworks Company built a first dam (this dam was later not used) and wooden water mains and they bought a portable sawmill and steam-powered donkey engine to harvest and cut timber to provide for construction. They used 88,000 board feet of cedar to build the first intake dam. A second intake facility was created in 1913, and
in case of low water supply from the Capilano River, which is 5 to 7 miles to the west of the Seymour River.\textsuperscript{34} This wooden pipe supplied water to the municipalities of North Vancouver, Vancouver, Burnaby and Richmond by 1908\textsuperscript{35} as it traveled to Vancouver in a water pipe underneath the Second Narrows Bridge.\textsuperscript{36} This wooden pipe was eventually replaced by a steel pipe in 1927\textsuperscript{37}

Midway Stop: (\textit{Allow people to have a break as there is a sheltered undercover area and a washroom located nearby; 10-20 minute break}).

Rice Lake also became a reservoir in 1912 through an agreement between the Hastings Shingle Manufacturing Company and the city of North Vancouver.\textsuperscript{38} The city attempted to take up ownership of the timber and mining rights in the Seymour area by buying up the leases around the Rice Lake Area. There was also an agreement between the Shingle Company and the city for the company to have water rights until the shingle bolt timber in the lake was removed and they were allowed to continue use of the lake to run the flume line during the spring and summer of 1911.\textsuperscript{39}

To alter the water at Rice Lake to become a reservoir, there was construction of a 16 inch wide wooden pipe that was installed into the bottom of the lake. Before they did this, they took up the water and drained the lake to remove all the prior wood mulch bits left over as it was previously a holding pond for shingle bolts. The pipe then connected to Lynn Creek to the west, in order to act as a backup supply when there was too much silt or lack of water present in the


\textsuperscript{35} Kahrer, 1989, FSTS.

\textsuperscript{36} Kyler, 1997, History of Forest Resource. According to Draycott (2000), the ownership of the Hastings Shingle Manufacturing company was owned by James and Robert McNair, and they extended their flume line into the Rice Lake area in 1903. They also had a mill on the shoreline of the Burrard Inlet, but a fire in the South Shore of the Burrard Inlet required them to build a new mill. Three years later, the ownership fell into the hands of J.M. Fromme and his business partner, then after two months Hugh Duncan McColl owned the Company. The camp at Rice Lake ended with an end to the shingle-bolt industry in 1911.

\textsuperscript{37} Cleveland, E.A. (1932) The Water Supply

\textsuperscript{38} Ibid

\textsuperscript{39} North Vancouver Museum and Archives [Hereafter NVMA], City of North Vancouver Fonds, Clerk’s Correspondence 1911-1914 Subseries 4, 20-2-1-4-25, George S. Hanes to Mayor and Council, May 12\textsuperscript{th}, 1911. The letter from Hanes to the City Mayor and Council goes into more depth, as Hanes argues that the ownership of Rice Lake as a reservoir become possession of the city. He was opposed to ownership by the B.C. Electric Company, which at the time held ownership of the rail line and a lot of housing development in the city of Vancouver.
Lynn Creek Water Basin. The lake and surrounding land was used by citizens of North Vancouver as water storage and settlement resource from the timber it provided. The problem was, a lot of sediment entered the pipe, so the Greater Vancouver Water District dredged the lake again in 1947 to replace the pipe in the base of the lake with a new pipe that was 90 inches wide in comparison to the previously 16 inch wide pipe (Figure 8). The city also purchased the 7.3 acres area of Rice Lake under land act certificate of purchase for $11 of crown land.

Sixth Stop: Enter the trail through the leftmost trail and enter the left path with a bridge following it. Here there will be a concrete bench and another bridge to go back out of this area.

Into the 1920s, attempts by the Vancouver City Council to control logging above the watersheds were approved by the Provincial Government. The Provincial Government prevented the dumping of logs or shingle bolts into the river above the water supply intake in fear that there would be cross-contamination. It would have also been a health hazard with the residue from timber harvesting entering the water intakes that supplied the city of Vancouver!

The Greater Vancouver Water District was established in 1924, and they were able to combine all water licenses. The water was previously managed by the Vancouver Waterworks Company that was established in 1886. In particular, Cleveland, the man in charge of the water board was concerned about loosened soil that eroded near logged timber that had the potential to

40 Kahrer. 1989, FSTS.
42 CVA, 1945, Rice Lake Investigation; NVMA, City of North Vancouver Fonds, Clerk’s Correspondence 1947 Subseries. 20-2-1-32-59. Greater Vancouver Water District to the City of North Vancouver, October, 1947.
43 CVA, Greater Vancouver Regional District Fonds, 65-E-5, “Rice Lake Replacement”, File 9, Summary of Agreement between Greater Vancouver Water District and City of North Vancouver, 17 December, 1947. The city of North Vancouver according to the Summary of the agreement, also paid a rate that was 20% above the amount paid by the City of Vancouver to have the water supply free of charge to the citizens of North Vancouver.
45 Kahrer. 1989, FSTS.
46 Gundersen, F. (1980). The rise and fall. Chlorination facilities were introduced by the federal government and were implemented by the Greater Vancouver Water District. During the Second World War, this was necessary because of paranoia that the water supply would be threatened, barriers and military guards made sure that did not happen.
47 Kahrer, 1988, Logging and landscape change on the north shore.
damage the quality of the water supply.\textsuperscript{48} The water districts increasing authority in 1926 allowed them to buy out or prevent private development such as logging.\textsuperscript{49} A year after in 1927, the city of Vancouver granted the 999-year lease of crown lands to the Greater Vancouver Water District.\textsuperscript{50} There was still private development on the lands, with private owners attempting to harvest the timber before the watershed was closed, with commercial logging coming to a halt. Logging practices in the watershed were under strict regulations that ensured there would be no damage or pollution to the water resource implemented by the Greater Vancouver Water District.\textsuperscript{51}

With the rights of the crown lands in their hands, the Greater Vancouver Water District completed a dam in 1928 on the Seymour River about 13 kilometers north of the river mouth.\textsuperscript{52} A lot of the shores of the Seymour River were cleared of logging and burned (\textit{Figure 9}).\textsuperscript{53} This burning practice was done in order to remove slash or wood debris left over from logging.

\textbf{Seventh Stop: Mossy Area, point out some tree species here that can be easily identified. Douglas Fir and Western Hemlock.}

In the 1930s, logging practices continued, but the Greater Vancouver Water District had the power to cancel the logging permit if there were rules that loggers did not follow.\textsuperscript{54} For instance, dead trees were allowed to be harvested as they would be a fire hazard, fallen trees would also be harvested as they could damage the water supply.\textsuperscript{55}

Most devastating of all was the invasive species attack, by the Hemlock Looper (\textit{Figure 10}), it threatened the tree species such as the Western Hemlock and Balsam. As a result, there was a mandatory timber cut to prevent the spread of the Looper to damage the forest stand any

\textsuperscript{48} Kyler, 1997, History of Forest Resource.
\textsuperscript{50} Vancouver. 1986, GVRD Parks Department. Lower Seymour Demonstration Forest Integrated Plan: Greater Vancouver Water District.Vancouver: GVRD Parks Department, 1986. [Hereafter Vancouver. GVRD Parks Department]; Gundersen, F. (1980). \textit{The rise and fall}
\textsuperscript{51} Kyler, 1997, History of Forest Resource.; Kahrer, 1988, \textit{Logging and landscape change on the north shore.}
\textsuperscript{52} Ibid
\textsuperscript{53} Kyler, 1997, History of Forest Resource.; Koop, 1995, Misinforming the Public.
\textsuperscript{54} Ibid
\textsuperscript{55} Kyler, 1997, History of Forest Resource.
By 1936, minimal logging in the area had to be slowed because of the damage created by the Looper attack on the trees. The damage created by the Hemlock Looper spread over 3 kilometers below the dam and 8 kilometers above. Another similar insect infestation occurred later in 1961 from the Balsam Woolly Aphid, and the Greater Vancouver Water District had to remove a lot of trees to prevent the spread of disease caused by the insect to the rest of the forest. The Greater Vancouver Water District also had to log 316 acres of the forest to prevent woolly aphid infestation on Balsam tree species from taking a full invasion on the forest. The Greater Vancouver Water District had to harvest the timber as much as possible before the infestation ruined the rest of the old-growth or original timber stand present in the area.

**Eighth Stop:** *Shady tree window out looking onto Rice Lake.*

The concern over water supply contamination led the Seymour Watershed and nearby watersheds of Capilano River to the west and Coquitlam River to the east to be off limits to public access onwards from 1936. Even though these precautionary measures were put in place, the Greater Vancouver Water District did not consider the wellbeing of fish such as the Salmon and the Steelhead runs that would return to the river to spawn their young. Many of the fish died upon their return trips to the spawning grounds.

In the 1940s there was a lot of reforestation to the area with seedlings of Douglas-Fir, Western Red Cedar and Sitka Spruce because of the damage by the insect species, the Hemlock Looper. The Greater Vancouver Water district was so concerned about damage to the pure water resource in the Seymour watershed that from 1945 to 1953, they went as far as killing mammals.

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56 Kahrer. 1989, FSTS; Gundersen, F. (1980). *The rise and fall* The infested area below the water intake was sprayed with calcium arsenate to control the pests, it was not used above the water intake in fear that it would damage the safety of the water resource.


58 Kahrer. 1989, FSTS.


60 Kyler, 1997, History of Forest Resource.

61 Ibid
such as the black bear, wolves and cougars to protect the water resource. In records, there were as many as 60 bears and 5 cougars killed, but this practice is not used today.\textsuperscript{62}

**Ninth Stop: Metal Grate with water running through it**

There is also the presence of past fires in this forest that traces back to an early fire in 1910, followed by another in 1921, and others into 1930s.\textsuperscript{63} There are probably more records of fires later on because there was increased attention to the area. The 1910 fire in particular, broke out of control spreading across the Lynn Valley from the west onto the Rice lake area, affecting a lot of the shingle bolts in the holding pond of Rice Lake. As a result of this, there have been fire towers and trails put in place to allow easier escape for individuals in the forest in case of a fire.\textsuperscript{64} Also, a five mile access road was built at the beginning of the trail to also aid fire suppression, with small clear cuts intended to limit the possible damage of a fire on the watershed.\textsuperscript{65} In 1940, the forest protection from fires was granted to the Greater Vancouver Water District by the B.C. Forest Branch, with a lightning strike in 1941 that led to an uncontrollable fire that went on for 6 weeks and damaged an approximately 85 hectares of forest in the Seymour Watershed. Therefore, it was important to take careful planning to prevent the reoccurrence of fires. Commercial logging was not allowed from 1936 to 1961, with fire wardens and Greater Vancouver Water District security patrolling the area to protect not only the watershed resource but the forest as well.\textsuperscript{66}

**Tenth Stop: Stop where you can see a huge cedar tree stump to the left of the trail. There is evidence of tree scarring from being burned.**

Here you can see evidence of the fires that have scared the area, and this tree was most likely cut down because it either fell over or was a casualty of the fire (\textit{Figure 11}). In 1952, the

\textsuperscript{63} Kahrer. 1989, FSTS. The fire that occurred in 1921 burned around 120 hectares of forest around Rice Lake in the Seymour Watershed, and the cause of the fire was unknown.
\textsuperscript{64} Kahrer. 1989, FSTS.
\textsuperscript{65} Koop. 1992, WakeUpVancouver.
\textsuperscript{66} Kyler, 1997, History of Forest Resource.
forestry consultant firm Schultz & Company Limited was granted the right to log the area. This land contained old-growth or primary forest that the Vancouver Water board intended to be free of logging to protect the watershed supply. The logging of the land for income to the land area was proposed following Cleveland’s death, with reasons to log involving prevention of fires, insect infestation, and old age. Trees that were old in age had the potential to catch fire easily, so cutting them down was a method of cautious logging. Not cutting down the mature trees would allow them to fall over due to old age, where they could become fuel to a dangerous forest fire. The reason not many profits could come of logging was because paying the workers and funding logging operations were expensive, and funds often went back into supporting more logging practices. In addition, the high erosion processes from rainfall in November 1955 caused flooding that prevented clear cut logging approval in 1958 near the public’s watershed supply.

**Eleventh Stop:** *Stay along the left of the trail but stop before you see rocks line up along the right side of the trail.*

In 1960, the Greater Vancouver Water District hired Consolidated Services Limited and logging occurred in the upper part of the Seymour Valley in order to rebuild the originally completed Seymour Dam from 1928. The Seymour Dam is located is the northern end of the Seymour River, and the upper part of it is closed from access to the public as early as 1936. The Greater Vancouver Water District hired and consulted with these foresters and engineers to clear 487 acres of forest in the proposed area, which brought in around $540,000! Even though this money was a large amount at that time period, a lot of this money went back into construction of the dam as it was a 7 million dollar project (*Figure 12*). The height of the dam was increased

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70 Koop. 1992, Wake Up Vancouver.
71 Ibid
72 1959, July 2 “Dam Provides Large New Supply- Boost Storage Capacity,” *The Citizen*: 1A.
and allowed the reservoir behind the dam holding the water resource to carry twice the amount of water that it could carry previously.\footnote{73
Ibid}

**Twelfth Stop: Stop along the rocky area to the right side of the trail. (Perhaps provide another stop here)**

In 1967, the Balloon Transport Company experimented with balloon logging on Lynn Ridge to salvage fallen logs created by Hurricane Freda (Figure 13).\footnote{74
Kahrer. 1989, FSTS.} However, there was a disaster where the helium filled balloon the size of 137 by 52 feet wide broke loose and landed on Grouse Mountain. The balloon itself cost $100,000 so they switched to smaller balloons, but this method of logging was eventually stopped because it was too expensive. Instead, there is more practice of helicopter logging as a form of aerial harvest of trees in management of the forest.\footnote{75
Kahrer. 1989, FSTS.}

The timber lease of 1927 was also altered in 1967 as an amending indenture\footnote{76
Kahrer, 1989, FSTS. ; Kyler, 1997, History of Forest Resource.} The perspectives on watershed management changed and logging was allowed on watershed lands to manage and promote the health of the forest. Watershed management was still the main priority, but timber production through logging was integrated into being the second priority.\footnote{78
Koop. 1992, WakeUpVancouver.} The public became very concerned that logging the old-growth forest in the area and the erosion of the soil would weaken the water holding capacity of the watershed. Forest administrators on the other hand, recognized that the best method to manage and keep the forest healthy was to practice systemic logging from 1960s to the 1990s to protect the watershed. This was done by preventing the spread of insect invasions, and harvesting old-
growth trees that have more burning material, increasing their ability to catch fire. This systemic logging was also known as salvage logging, where the logging method used allowed them to log the area without sacrificing the water quality.

**Thirteenth Stop:** *Stop again at the model flume line.*

There have been continuous “working plans” spanning from 1970 to 1988 that attempted to aid the vitality of the forest with careful planning from gathering data on the forest. From this, they reduced the allowable cut of timber from the forest to 50% less, to eventually 25% less than the previous amount, cutting timber only on stable areas. There was also further analysis of the climate and vegetation species in the area that have led to a better understanding of the Seymour Valley and suitable management strategies. The salmon and steelhead fish runs that were severely damaged with the construction of the Seymour dam in 1928, led to the establishment of a fish hatchery as a rehabilitation project for the fish in 1987.

Rice Lake was also used as a backup reservoir to Lynn Valley’s water resource until a flood in 1981 when heavy rainfall destroyed the intake system built into the lake.

The lands of the Lower Seymour Valley were officially open to public access in 1987 as the Seymour Demonstration Forest, which promoted recreation, forestry and learning activities altogether. The public were allowed to use the area as a municipal park, which allowed them to learn about the changed processes of the park in various nature and watershed tours.

**Fourteenth Stop:** *Continue walking through the Lynn Headwaters Connector trail until you reach a metal plate that says GVRD on it.*

The divide between the upper and lower Seymour forest contains the Seymour Dam and Salmon Hatchery, and this was accessible with the opening of the Seymour Demonstration forest.

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79 Koop. 1995, Misinforming the Public.
81 Ibid
82 Kahrer, 1989, FSTS.
84 Kahrer, 1989, FSTS.
85 Ibid
because of an 11km paved road. The road allows cyclists and those attending watershed tours to view the Seymour dam and hatchery. The forest at the time was majority second growth because logging removed a lot of the old growth trees and the dominant tree species structure has also changed. As a result of this, the forest stand was allowed to regenerate naturally as there would be seeds from adjacent trees falling into the understory; silvicultural treatment—where seedlings are planted into the ground to repopulate the tree species — was also practiced in the case that there was less of a certain tree species. Slash burning also stopped completely in 1988 because of the air pollution caused by the smoke from burning the wood.

**Fifteenth Stop:** Walk back to the Gazebo at Rice Lake Gate.

I hope you all enjoyed this walking tour on a forest history of the Seymour Watershed. As you know, the park was renamed to become the Lower Seymour Conservation Reserve. The forest today has changed from being an unmanaged “free for all” resource management style in the late 1800s and successfully transitioned to carefully planned and safe resource management that involves public input in decision making processes. The upper closed watershed of the Seymour River is also currently used in our municipal water resource. I hope all of you were able to have a deeper understanding of the history of the Seymour valley forest from this tour. Thank you.

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86 Trendell-Whitaker, 1989, June 7, Spend a day at the Seymour demonstration forest. *The Chronicle.*
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North Vancouver Museum and Archives, City of North Vancouver Fonds, Clerk’s Correspondence 1947 Subseries. 20-2-1-32-59. Greater Vancouver Water District to City of North Vancouver, October, 1947.

North Vancouver Museum and Archives, Nikkei History Research, 26-19E-7, 8, 11.

Vancouver City Archives, Greater Vancouver Regional District Fonds, 65-E-5, “Rice Lake Replacement”, File 9, Rice Lake Investigation, 18, 24 February, 1945.


Figure 1. Walking tour outline.
Metro Vancouver. [Map] Retrieved from
http://www.metrovancouver.org/about/maps/Maps/LSCRTrailMap.pdf

Figure 2. Skid road with horses pulling the logs
North Vancouver Museum and Archives. W.M. Draycott Fonds, Hastings Shingle and
Figure 3. 36 foot model flume line in the Lower Seymour Conservation Reserve
Photo taken by Amanda Tsang. 2013, March 30.

Figure 4. Actual Flume line, with a skid road on the left side.
Figure 5. Springboard logging using a double bladed axe.


Figure 6. Rice Lake full of Shingle Bolts.

North Vancouver Museum and Archives. July 1908. 7389-9095.
Figure 7. Japanese workers of Rice Lake Camp.

Figure 8. Rice Lake drained and temporarily shut off to lay a GVWD 90 inch water main through the center of the lake.
North Vancouver Museum and Archives. Rice Lake. 1950. 19462-14262.

Figure 9. Clearcut logging and burning.
Figure 10. Western Looper, an invasive insect species.

Figure 11. Cedar Tree with fire scars
Photo taken by Amanda Tsang. 2013, March 30.
Figure 12. Constructed Seymour Dam in 1961.

Figure 13. Balloon Logging in 1960 in the Seymour Watershed near Rice Lake.