

700 Bay Street  
24th Floor, Box 330  
Toronto, Ontario  
M5G 1Z6

**IN THE MATTER OF**

The Lakes and River Improvement Act.

**AND IN THE MATTER OF**

the proposed refusal of the application of the following persons for approval of a dam on Clinto Creek, being the outlet of Clinto Lake (also known as Hardwood Lake) on Lot 3 of Registered Plan 215, being part of Lot 8, Concession IV of the Township of McClintock in the County of Haliburton.

Mr. D. Anderson	Ms. E. Broadley
Mr. T. Clarke	Mr. B. Fuchs
Mr. D. Green	Mr. S. Hawkins
Mr. D. Hay	Mr. D. Wright
Mr. K. Jarratt	Mr. F. Closs
Mr. D. Lowry	Mr. E. Park
Mr. B. Ridgley	Mr. R. Sands
Mr. D. Sutton	Dr. A. Tweedy
Mr. P. Woodward	Mr. R. Cunningham
Mr. C. King	

**REPORT TO THE MINISTER OF NATURAL RESOURCES**

As requested, the undersigned has held a hearing under the provisions of the Lakes and Rivers Improvement Act as to whether the proposed refusal of the application for approval of the dam is fair, sound and reasonably necessary for the purposes of the Lakes and Rivers Improvement Act. The hearing was held in Toronto on the 4th and 5th days of November and on the 9th, 10th, 12th and 13th days of December, 1985.

At the hearing C.E. Mansfield appeared on behalf of the Ministry of Natural Resources. The applicants for approval, A.E. Knecht and William Steele were represented by Alan J. Davis. D. Andrew Thomson represented John Jeffrey, Alexander Jeffrey, Louis Hawkins and David Hawkins. The evidence indicates that wide notice of the hearing was given by the Ministry. The local municipality, i.e. the Township of Sherborne, McClintock, Livingstone, Lawrence and Nightingale did not appear but forwarded a letter to the tribunal that was filed as Exhibit 75.

The application involves an existing dam, which could be more descriptively referred to as a weir, that is situate at the outlet of Clinto Lake, sometimes known as Hardwood Lake, on Lot 3 according to Plan 215, being a subdivision of Lot 8 in Concession IV of the Township of McClintock in the County of Haliburton. The

weir is between four and five metres in length and is constructed over an existing rock outcrop which formed a natural barrier for the waters of the lake. The height of the weir was said to be .25 metres and the evidence indicates that the depth or height of the weir varies with the height of the bedrock on which it was situate. Clinto Lake Measures is 3 miles in a north-south direction and is 1 miles at the widest location in an east-west location. It has a number of bays, including peninsulas. It does not have a significant inlet and is fed by run-off and springs. It outlets over the dam in question in the southwest corner of the lake.

The Hardwood Lake Cottage Owners Association has been in existence as an unincorporated body for some years extending back to 1959. It has never been incorporated and the applicants made the application in their personal capacities.

According to the assessment roll (Exhibit 22) of the area there are approximately thirty landowners on the lake and the islands in the lake. There appears to remain some Crown land on the lake. Access to the lake is provided through a road lying to the east of the lake and a public landing is presently situate at the southeasterly part of the lake.

A few of the cottages on the east side of the lake are accessible by road but the majority of the cottages have water access only.

Before calling evidence Mr. Davis outlined some of the history in respect of the dam as it appeared from the minutes of the Association which were filed as Exhibit 35. Mr. Davis indicated that the minutes show that the forming of the Association occurred in July of the year 1959 and minutes of the meeting of July 26, 1959 indicate that one of the areas of concern was the water level of the lake and the possibility of a dam to maintain the water level. Dr. A.H. Jeffrey, the father of the two Jeffreys that appeared at the hearing was present at this meeting and represented his wife. A further meeting was held on November 3, 1959 which was attended by Dr. and Mrs. Jeffrey. The minutes indicated that there was lengthy discussion regarding the levels of the lake and that there were three major concerns, namely, bad docking, the

possibility of better fishing if the water level was raised and the existence of dangerous rocks in periods of low water levels. At this time they had received a letter from the late F.W. Beatty, Surveyor General, pointing out the requirements of the Lakes and Rivers Improvement Act (Exhibit is), which letter pointed out the need of the Association to be incorporated before it could be considered as an owner entitled to construct a dam. The matter was left for review until the meeting in July, 1960 at which no discussions took place. However, on a meeting of August 15, 1960 a document was prepared (Exhibit 16) which was signed by twenty-two landowners and read,

In regards to water level on Hardwood Lake in the Township of McClintock, I give my consent to have the water level raised 6 in. from a given mark on Dr. Jeffrey's Dock at the head of the Lake. Also a permanent mark on bedrock on lakeshore.

This document was signed by E.S. Jeffrey and A.H. Jeffrey. In addition, correspondence was filed in respect of landowners that had not signed the document. The form letter that went to these landowners read, in part,

The level agreed upon was 6 inches above the water mark on Dr. Jeffrey's and Lloyd Green's docks as of August the 9th, 1960.

The fixing of the level on that date was by driving a spike in each dock at that water level.

The minutes further indicate that the dam was constructed in 1965. The minutes indicate that in 1962 the Association passed a motion to construct a dam at a cost of \$200. There were no minutes in respect of a meeting in 1963. The minutes of the meeting of August 2, 1964 at which Mrs. E.S. Jeffrey was present contained an Item 6 as follows,

Mr. B. Green reported that the expenditure of \$200.00 as authorized in minute (8) of the 1962 meeting had not been undertaken, as it was not considered a wise project by Mr. W. Ellerington of the Department of Lands and Forests, as he could give no guarantee of continuous surveillance during the spawning season.

Apparently the dam was erected subsequent to that meeting and prior to the meeting of August 1, 1965 as Item 8 of the minutes of the meeting held on August 1, 1965 stated,

B. Green outlined the condition of the dam at the outlet. He also reported on a telephone conversation with Mrs. Jeffrey in which she agreed that she had

given permission to her sons to dismantle the dam in order to lower the water level.

She expressed regret for the action and agreed to pay for the restoration.

A motion was made that the dam be restored and that Mrs. Jeffrey be billed for the amount equal to the original cost.

The 1966 minutes indicate that as of August 1, 1966 the dam had not been rebuilt. However, it was agreed that all interested members attend at the site the following day. It was understood that this was done and the dam was reconstructed.

The minutes indicate that minor repairs were made to the dam in 1968 and that in 1969 the subsequent minutes indicated that the dam was considered to be in good condition. It also appeared from the minutes that the Association erected a screen with a view toward preventing the migration of trout downstream and that the mesh in the screen had been changed from time to time.

Throughout the most of these meetings some members of the Jeffrey family were present.

In 1983 the Jeffrey family made demands that the dam be removed as they considered that it was causing damage to their properties at the north end of the lake. There followed a number of bitter encounters, some involving officials of the Ministry of Natural Resources, none of which are referred to herein as they have little bearing on the merits of the application.

A number of the applicants gave evidence. William Douglas Steele who has been familiar with the lake since 1948 because his father owned a cottage from that date was in the process of acquiring 4,400 feet of lake frontage along the southeasterly shore of the lake which he proposed to subdivide. Approximately 1,200 feet of this property is a shallow beach and he was concerned that if the water were dropped six or eight inches the property would be less saleable and of less value because the existing water would be reduced. He also referred to two areas of rocks in the lake, one off his point and another in the central part of the lake and he felt that the lowering of the water would effect sailing on the lake. With reference to fishing, he indicated that he had no expertise but had understood that the

purpose in raising the water in the beginning was to aid the lake trout populations and presumably the reduction of the water level would offset the benefit obtained from the construction of the dam.

On cross-examination the witness admitted that if the water levels were adjusted, the docks that would be erected could be constructed in accordance with the revised water levels.

David Sutton, who was the president of the Association in 1982, occupies his fairly large cottage measuring approximately 75 feet in length from late April until November. He has a large dock, 20 feet by 12 or 15 feet. There is a shallow rock in front of his property but there is sandy beach adjacent to the rock with the rear of the dock being in a shallow marshy bay. He has a 14 foot aluminum boat and a 12 foot fibreglass boat and considers that he has adequate clearance at the end of his dock.

The witness filed as Exhibit 19 a publication of the Ministry of the Environment showing the results of studies of various lakes in Ontario in respect of their susceptibility to acid rain. This booklet shows Clinto Lake as having a high sensitivity to acid rain. The witness expressed concern in respect of the fishing in the lake if the waters were lowered, particularly in relation to the susceptibility of the lake to acid rain and the reduction of volumes of water in the lake. He fishes rainbow trout in the spring and had no knowledge as to what would happen to the fishing if the water were lowered. He also expressed concern regarding the public access dock indicating that even at the present time one side of the dock is not suitable for the mooring of boats because of the depth of water and the presence of rock.

Dr. Roger Albert J. Tweedy purchased a cottage in 1980 on the west side of the lake and in 1981 acquired two vacant lots to the north thereof. His wife was familiar with the lake as she had visited the lake since the sixties and had knowledge of the dam and its location. He was not aware of the issues respecting the erection of the dam until 1983. He expressed concern in respect of the lowering of the water because there are hazardous rocks in the lake and most owners have water access only. There is a great deal of rock in his bay. Although marked, during evenings and nights

crossing is difficult and access to the cottages, particularly the more northerly property would be difficult if the water levels were lowered. Most of the rocks are exposed in the summertime during the lower water levels and he felt that if the water were lowered eight or ten inches there would be a greater hazard. He also felt that there were rocks in other parts of the lake which would become a hazard if the waters were lowered. In his view there were no other hazards to be created from lowering the water.

On cross-examination, the witness stated that the existing dock was in place when he acquired the property. He also stated that the bay contains rocks and shoals and is hazardous today and it is necessary to follow familiar channels in navigating the bay. Plastic bottles have been used to mark some of the rocks but the channels have not been marked. He also agreed that the lake was clear and the hazards are obvious particularly to most cottage owners who are familiar with the hazards as they now exist.

On cross-examination by Mrs. Mansfield, the witness indicated that the northerly property was so faced with rocks that if the water were lowered it would be necessary to land on an adjacent property for access to this lot.

William Fuchs of Pennsylvania acquired a lot at the northwest part of the lake in 1948 and erected a cottage in 1949. He had been a visitor to the lake since 1937 having fished in the lake during duties as a counsellor in a boys' camp on Otter Lake. His wife owns a lot to the north end there was a small cottage erected in 1949 or 1950 on her lot. He and his wife are canoeists. The area in front of their cottage is sandy and they have a dock measuring 6 feet by 20 feet as the sand beach goes out 40 or 50 feet. His concern was that if the water were lowered it would be necessary to lower the docks as there would be difficulty in debarking from canoes with the dock being at a higher elevation. He suggested that this might be achieved by building a lower addition along the side of the dock. He indicated that the existing rocks in the lake were not of concern to him and his wife although visitors with large motor boats are at risk of striking unmarked rocks.

Mrs. Alice S. Fuchs confirmed her husband's evidence and indicated a concern that the public dock would be less convenient if the water were lowered.

Reginald Charles Ridgley owns a lot on the southwest corner of the lake acquired in 1974. He has been visiting the lake since 1963. He has a crib dock which was built in 1979 or 1980. It is an L-shaped dock made of hemlock and rock and covered with two by eight spruce. The depth of water at the dock varies from 6 inches to 38 inches at the north end of the dock.

He described the southwest part of the bed of the lake as having a shelving bedrock with silting sand in the lower areas. The depth of water at the shore is approximately 9 to 12 inches at his property. To the north of his property there is a boulder strewn area which can create problems for navigation. He estimated that there were 50 such boulders in the area and that only one may have been marked. These boulders extend a distance of 50 to 60 feet from the shoreline. He operates a 14 foot aluminum boat with a 9.9 horsepower outboard motor and has approximately two to three inches of clearance when the boat is facing the shore. He cannot moor his boat facing the lake. If the water were dropped eight or ten inches, there would be no water adjacent to the portion of the dock that parallels the shoreline and this area would no longer be available for bathing. He also confirmed that the lowering of the water would affect the use of the public dock. He also referred to a wide-ranging shoal between the public dock and the bay in the southwest part of the lake which is egg-shaped or oval-shaped. It has one unlit marker and in the estimate of the witness the shoal covered an area of from 1,000 to 1,200 square feet. He felt that if the water were lowered the hazardous area would be increased to 1,800 square feet but he was unable to measure the areas affected. He stated that he had hit the shoal on occasions as a result of wind or darkness.

The witness noted that he had no expertise in respect of fishing although he had fished over the years particularly in the

current year. He stated that he has observed wildlife including moose, deer, raccoons, mink, otters, mergansers, black ducks, kingfishers and martens on the shore and on some of the islands. He indicated that with the rising waters a considerable amount of shoreline had been flooded and if the water were dropped this flooded area would become exposed reducing the amount of marine habitat. He admitted that his purpose in maintaining the water levels was a selfish reason as he acquired the cottage with the water at its present level and would like to keep it in that manner.

Kenneth Caldwell Jarratt, who owns the island in the northeast corner of the lake and formerly known as Green's Island gave evidence that he and his wife, Emily Jean, have owned this island since 1972. Along the southerly shore of the island there is a sandy bay but the remainder of the shores of the island are composed of rock. The waters in the bay vary from 0 to 8 inches. In the bay there are a number of very large rocks some of which are a few inches below the surface.

There is no road access to the Jarratt island and access is provided by two boats that are 12 and 14 feet in length and are powered by a 5.5 and 15 horsepower motors respectively. The boats are docked at two docks on the island, one of which was erected in 1952 and the other erected in 1983. The older dock measured approximately 25 feet by 15 feet and is located some distance from the shore. This dock is situated at the southwest corner of the island and it is joined to the island by a bridge. The depth of water at the outside of this dock is eight feet. The water between the docks and the island measures from seven feet to eighteen inches.

The second dock is 14 feet in length and is situated on rocks on the east side of the island. The water is low at this location with there being four inches between the skegs of the motors and the bed. To maintain the use of this dock it has been necessary to remove some of the lake bottom. If the water were reduced by ten inches the dock could not be used. Mr. Jarratt was not aware of the cost of erecting this dock but 75 hours of time by three people were involved in its construction in addition to the cost of the material.

Mr. Jarratt was aware of the dam at the time he purchased the island as the vendor Green explained to him the purpose of the dam, emphasizing that fishing and reduction of dangerous points in the lake were the purpose for the dam.

Mr. Jarratt also expressed concern regarding the use of the public dock in the southeast corner of the lake in the event the level of the lake is lowered. In his view the first 30 feet of the dock would become completely unusable if such a lowering of the water occurred. He also gave evidence that the channel between the island and the mainland is shallow and in his opinion if the water were dropped it would be impossible to navigate in this area.

Mr. Jarratt indicated that there was a considerable amount of wildlife on the island including marten, mink, loons and mergansers. He is a bird watcher and has observed the nesting habits of the loons and the mergansers. He expressed concern that if the water levels were to drop the existing habitat of these water birds would be effected as the present water levels enable the birds to walk onto the shore but if the water were dropped there would be a rock cliff up which the birds would not be able to walk.

Mr. Jarratt had an opportunity of examining the cottage on A.H. Jeffrey's property. On the invitation of the landowner he crawled under the cottage and was in the cottage. He noted no problems in construction. The only problem that he noted underneath the cottage were cracks in the fireplace. The fireplace was built of stone. He noted no cracks in the footings and he was of the opinion that the cracks in the fireplace occurred because the brickwork in the fireplace was too thin. With reference to the shoreline along the Jeffrey property, he noted that stones or rocks had been placed along the bank and that sod was growing to and hanging over the rocks. He noted a five inch drop to the sand below the sodded areas. He observed that this is the only part of the lake that is stripped of vegetation along the beach.

Mr. Jarratt also noted a significant drop in the number of schools of minnows and other small fish and was concerned that if the water were lowered, these populations would decrease.

Mr. Jarratt also gave evidence that every year he portages to McFadden Lake and parks his boat at the area lying to the northeast of the Jeffrey property. He has tied his boat to the same tree and rock for 13 years and has seen no indication of shifting of the shore.

Mr. Jarratt's evidence was that if the water levels were reduced his easterly dock would cease to be useful and that the only remedy would be to place the dock further into the lake which would become an unreasonable distance. He indicated that he had a personal concern or fear in respect of night navigation on the lake. He indicated that it was a difficult lake to identify your location at night and that very few of the hazardous rocks are marked. He indicated that on several occasions he had struck rocks while navigating the lake.

On cross-examination Mr. Jarratt indicated that the easterly dock was more of a crib along the shore, being a crib which was filled with stone, gravel and sand. When asked if it was not his major docking area, he indicated that this dock was used most of the time and that the clearance at this dock was approximately four inches. He also admitted that he had no expertise in construction and that his opinion as to the cause of the cracks in the fireplace was pure speculation. When questioned as to the depth of the channel between the island and the mainland, he indicated that the depth was approximately 16 to 20 inches and that a 5.5 horsepower motor could pass through the channel with a three and one half foot clearance on either side.

David Wright who owns a cottage on the westerly side jointly with David William George Hay, owns a sixteen foot boat equipped with a 65 horsepower motors. The property to the south is owned by his father-in-law, Cornell King, who has been coming to the lake since 1953. The cottage on the lot which he owns is not liveable and is under renovation although there is a dock at the property.

The dock on the Wright-Hay property was constructed in 1984 and measures fifteen to twenty feet in length and three feet

in width. The depth of the water varies from four inches at the shore to two feet at the other end of the dock. The large boat cannot be brought in closer to the shore than the end of the dock and if the water was reduced eight or ten inches the large boat would have to be taken to the King dock. The smaller boat can be moored halfway in the dock. The estimated cost of the dock was \$300 involving two days work by Messrs. Wright and Hay using materials that were on hand.

On the King property there is a permanent dock eight feet in length with additional sections measuring a total of 32 feet. The width of this dock is three feet. There is a depth of two feet at the outer end of the dock and four inches at the shore. The shoreline in this area is rocky with a drop-off at the water's edge. Below the drop-off there is a sandy shelf.

Mr. Wright was aware of the existence of the dam from the sixties and while he had heard of there being logs in the area prior to the construction of the dam he was not aware of there ever having been a beaver dam at the location.

With reference to the effect of lowering of the water level he was concerned with respect to the use of his larger boat and the possibility that it might strike rock shoals that are in the lake. The children water-ski and there are shoals in the centre part of the lake which would be more likely to be hit if the water were lower. In addition there is a shoal in front of the property with water at waist heights which can be observed while windsurfing. He indicated that if the water levels were changed it would be necessary to re-examine the lake to determine where the activities could be carried on. With reference to the use of his large boat, it can only be docked at the ends of the docks and during 1985 it became necessary to clean out the areas beside the docks. This was done on the east side of the dock but there can be no docking on the other side by the larger boat. If the water was lowered the larger boat could not be tied to the dock.

The Kings are over 80 years of age and visit the area on few occasions and are dependent on the Wrights for bringing them to their property. The large boat is essential for this purpose because of the age of the Kings and even at the present water levels a rock has been hit.

On cross-examination Mr. Wright admitted that there was a history of silting in the area and that regardless of the depth of water it would be necessary for an annual removal of the bed to permit docking. It was also stated that the depth of water over the shoal in the centre of the lake was sufficient to permit water-skiing over the shoal.

On re-examination the witness dealt with implications of lower water at the public dock indicating that one side of the dock cannot be used at this time and that if the water were lowered it would be necessary to extend the dock. However he was unable to advise of the cost involved.

Mr. Hay's evidence indicated that he had constructed a cottage on the property to the south of the King property in 1962 after purchasing the lot the previous year. He assisted with the construction of the dam in the mid-sixties. He had no knowledge of any prior dam. It was his view that the dam had been constructed for the sole reason of reducing rock hazards throughout the lake.

Mr. Hay stated that there was a rocky shelf protruding from the shore a distance of 50 to 60 feet along this part of the lake. The water over the shelf is shallow. In addition there is a three-quarter acre island in front of his property. In the summer he is unable to get a boat close to the shoreline and accordingly built a causeway to the island. There is deep water beyond the island. While the witness referred to the structure as a causeway, Exhibit 26 illustrates that the structure is a steel framework with a plank deck which is supported with pillars made from concrete or concrete blocks. The water between the island and the mainland is quite shallow and Exhibits 27 and 28 illustrate the nature of the bed of the area between the island and the mainland. The water in this shallow area is filled with rocks that protrude above the surface of the water and sustains a growth of aquatic weeds. The evidence indicated that it was not possible to bring a boat to the end of the bridge. Further, it was stated that although there was deeper water outside the island, this area is exposed to ice and cribs and docks would be destroyed.

Inside the island the depth of water ranges from six inches to eighteen inches. The Hays use smaller boats, namely 14 and 16 foot aluminum boats powered by 20 and 9.5 horsepower motors. Although they moor the boats along the bridge they have difficulties because of the rocks and if the level were lowered an additional eight to ten inches they would not be able to put in a boat. The structure has been in place approximately eight years and the estimated cost was in the nature of \$3,000.

Mr. Hay outlined problems with the public dock. The southwest side is too shallow for docking. Parking of boats cannot be done on the north side as their presence would interfere with the use of the launching area. When boats are left overnight, they are usually left on the shore and are not tied to the dock. In his opinion, if the water were dropped, it would be necessary to extend this dock another 60 feet or place a lateral section at the end of the existing dock. He also expressed the view that in dry summers, if the water level were lowered, the low bottom along the southerly side of the dock would fill up with weeds and become a swampy area.

Mr. Hay operates a seaplane. He foresees problems in docking the seaplane in the event the water were lowered. He also foresees problems in taking off and landing the seaplane. Greater caution and more expense would be involved. He was particularly concerned with the shoals at the south end of the lake and with a reduced water level there would be a shortening of the area for take off. Mr. Hay has fished the area for 20 years and is generally familiar with the location of the shoals. He indicated that it is difficult navigating at night. In addition he noted that the fishing had deteriorated in recent years.

Mr. Hay indicated that he was familiar with the Jeffrey property having attending meetings there and hunted the area. He suggested that the shoreline had not been subject to erosion. He produced three photographs of the property taken in November, 1974 which show the water at a very high level, almost reaching the

sodded area above the rock wall. Three photographs taken in October, 1985 indicate that the water level was lower with a significant portion of the rock wall being exposed above the water level. However, two aerial photographs taken in October, 1985, Exhibit 32, show the water extending to the shoreline, the shoreline curving to the north in areas to the west of the protective wall and dark areas therein which may be darker topsoil washed into the lake.

On cross-examination Mr. Hay indicated that there are three general areas where there are rock hazards, namely, the southwest area, the centre and the area near Jarratt's island. He felt that there would be four or five boats that would hit shoals if the water level were reduced. He felt these boats would draw three feet of water. He also indicated that in addition visitors frequently have larger boats.

The witness was also cross-examined regarding the length of the lake and the implication respecting take off of aircraft. The witness indicated that the lake measures two miles at its longest point but he felt that, on calm days and keeping in mind the hills and trees surrounding the lake there might not be a sufficient area for take off if a pilot were to stay adequately clear of the shoals in the southwest part of the lake.

George Edward Clarke and his wife purchased a property that is the second property north of the Hay property on the westerly shore in 1969 and constructed a cottage in 1970. Their property is serviced by an L-shaped dock built around a rocky front. It is a crib type dock with timber construction and was built in 1974. Prior to that a floating dock had been used. In summer the height of the surface of the dock is ten inches above the water level. It was suggested that the rocks surrounding the docks are a hazard. Three photographs were filed as Exhibit 33 and illustrate rocks. However it is interesting to note in passing that the third photograph shows a boat moored over one of the rocks that was said to be a hazard. Concern, of course, arose only if the water level were lowered a further ten inches. Also, in passing, it may be noted that on the photograph marked "B" on p.16 of Exhibit 60 the boat appeared to have been left very close to the

shore in a tied-up condition. The latter photographs were taken after the hearing had commenced. The witness's evidence was that if the water were lowered he would only be able to use half of his dock.

Stanley Russell Hawkins acquired a property on the west side of the lake at approximately midpoint on the west shore in 1981 and constructed a cottage in 1982 after taking steps to acquire the road allowance. He uses a floating dock and would have no problems in connection with a change in elevation. He does, however, own and hire aircraft and makes twelve months use of the property. It was his opinion that no one would be disadvantaged if the water level was retained at its existing elevation. He gave evidence regarding the measurements of the length of A.H. Jeffrey's dock and the depth of the water at the dock indicating that on the Friday previous to November 5, 1985 he had made measurements at the dock which indicates that there was nine inches of water from the water's edge to the end of the dock and that the depth of water had no variation along the entire length of the dock. With reference to the use of aircraft, the witness is satisfied that the central part of the lake is safe for aircraft at this time but he was not aware as to whether it would be safe if the levels were lowered. He has a 14 foot boat with a four horsepower motor and seldom travels on the lake. He has struck rocks in the lake because he was not aware of their location.

The witness indicated that his shoreline was rocky but that the lake did provide habitat for wildlife including beaver, although he had never seen any, mink, minnows and ducks which feed upon the minnows.

On cross-examination the witness admitted that the boulders could be seen during daylight hours from the air but he was not in a position to know the effect of lowering the water level.

Margaret Lowry, whose father, Dr. E.S. Steele purchased a property in 1947 or 1949 on the northwest part of the lake, acquired the property from his estate and had spent a considerable part of her life visiting the lake in the summers. There is a crib

type dock measuring thirty feet by eight feet in connection with their property that was built in 1948 or 1949. It has been repaired in part over the years. Four years ago it was rebuilt from the water line upward at an estimated cost of \$1,325. The top of the dock is approximately 14 inches from the water level. They use a 14 foot fibreglass boat with a 33 horsepower motor and a 14 foot aluminum boat with a 5.5 horsepower motor.

Mrs. Lowry's evidence was that they currently have no problem regarding rocks and shoals although this was not the case when the water was low. She indicated that the lowness of the water was one of the reasons that her father had played a role in having the water raised. It was her evidence that the wooden dam was erected in 1962 and replaced in 1965 with a concrete dam but she indicated that she was not precisely sure of these matters.

Mrs. Lowry was concerned that the lowering of the water would cause a considerable expense in respect of repairs to her dock. The lower parts of the dock were constructed some 36 years ago and if the stringers were exposed they would rot easily and it would be necessary to make extensive repairs to replace the lower stringers in the event they rot out. She indicated that it was estimated that it would cost from \$1,300 to \$2,000 to replace the lower structure of the cribs.

Mrs. Lowry also was concerned regarding navigation by children over the rock ledges that have been mentioned in the previous evidence.

A statutory declaration of Albert E. Knecht, who owned a large tract of land in the southeast corner of the lake from 1950 and is currently being sold to William Douglas Steele, was filed as Exhibit 36. Paragraphs three to seven of the statutory declaration read,

3. That it is my considered judgement resulting from observation of the water level of Hardwood Lake over the past 35 years that the building of the said dam has had little effect on the water level at the north end of the lake. That the problem, if any, is due to the soil condition with little or no rocks at the edge of the lake and that any damage to the north shore is due to storm damage causing high waves at that end of the lake.
4. That the owner of the north shore property at the time the dam was built approved the construction of the dam along with the majority of the other property owners at that time.

5. That before the dam was built, a natural dam had occurred in the forties made up of logs and debris that helped maintain the water level and further that the chief complainant in this matter asked me to help he and his brother in the early 1950's pile more logs and debris on this natural dam to help raise the water level at the north end of the lake so that they could get to their dock end with their boat.
6. That lowering the water level of the lake could cause me a great deal of expense to extend my boathouse ramp required to launch boats and to extend the dock to water of swimming level or depth.
7. That fishing is of main interest to most of the cottage owners on the lake and that one of the main reasons for construction of the dam was to prevent fish from going down stream when the water is high in the spring thaw and that the main purpose of the dam was to attach a steel wire net at the dam site to prevent the fish from going over the dam.

Peter John Woodward purchased the property immediately south of the property owned by Margaret Lowry in 1982. At that time there was a one room cabin and a dock. He subsequently enlarged the cabin and rebuilt the dock. The main portion of the dock measures four feet by forty feet and is supported by three cribs. It was built in 1984 and 1985. The cost of material was approximately \$1,800 and labour was provided by members of the witness's family. There are two wings to the dock, one at right angles to the main portion along the shore and a second wing, ten feet in length, is located near the central part of the main dock. The two wings run in an easterly direction. The area between the two wings has been cleared of rock and provides a child's pool with water approximately ten inches deep. The water beyond the wings is four feet deep but at the outer end of the dock there are, on the easterly side, several large rocks over which the clearance is approximately three and one half feet. At the end of the dock the water is five feet deep but this drops very quickly along the west side of the dock. Only the west side of the dock is used for the tying up of boats. The witness owns a sixteen foot boat with a fifty horsepower motor that is used for water-skiing and other boats.

The dock faces in a southerly direction and the witness leaves his boat tied to the dock during the summer. He prefers to

leave the boat facing in a southerly direction as this prevents the waves washing over the transom. The witness expressed concern that with the lowering of the water the children's pool would disappear and that it would be impossible to use the easterly side of the dock for mooring. The useful distance along the westerly side would be reduced with a drop of ten inches. Further, the bay in the area is filled with shallow rocks which are frequently struck by the witness although he is relatively aware of their existence and location. He feels that many of these rocks would surface if the water were dropped ten inches.

Mr. Woodward also gave evidence regarding the presence of ducks, blue heron and minnows and although he was not an expert on wildlife he felt there was some concern for these species. He also expressed concern regarding the use of the public dock which cannot be used now on the westerly side.

The witness's evidence was that he was unaware of the existence of the dam at the time that he acquired the property and started the construction of his dock, not having learned of the dam until the cottage owners association meeting held in the year 1983.

Yvonne Lafreniere who jointly owns the property with Mr. Woodward gave similar evidence, particularly emphasizing that the underwater rocks were hazardous to swimmers and particularly the swimmers who dive.

Donald Edward Green, son of Lloyd Green who at one time owned the island now known as Jarratt's island and who also acquired a parcel on the east side of the lake, is now the owner of the mainland property that his father acquired. He has been familiar with the lake since 1953. His property has road access but he does considerable fishing in the lake. He outlined the general areas of rocks indicating there are shoals or rocks in the central part of the lake, the southwest part, the southeast part in the vicinity of the public landing and along the west shore. He expressed concern that although parts of the lake are some 90 feet in depth there are rocks hazards which would be exposed or which would be 20 inches from the surface rather than thirty inches and which would be hazards particularly with waves often reaching one to two feet in height.

Mr. Green produced a copy of the contract to build the Jeffrey log house in 1945 and he also produced from his mother's records a print of a snapshot taken shortly after completion of the cottage, Exhibit 42. It may be noted from this photograph that there is no bank showing along the water's edge and the level of the water appears to be very little below the level of the ground underneath the building. There was no indication of the date of the photograph but the deciduous trees shown in the photograph are in full leaf, particularly a felled tree. It is unlikely that the photograph was taken in early spring or late autumn. He also produced a photograph taken in 1983 and from the activities indicated in the photograph it would have been taken during July or August. There appears to be a significant difference in elevation between the water of the lake and the base of the building.

It was this witness's view that the purpose of the dam was to make the water safer for navigation, to assist fishing and to provide for better landing at the public dock.

Margaret Elaine Broadley, who was the president of the Association from 1983 to 1985, and other members of her family own three properties at the southerly end of the lake which are situated adjacent to Lot 3 on which the dam is constructed. They were not aware of the dam at the time the property was purchased in the early seventies. They have made considerable repairs to the buildings and docks on the properties. One dock measures eight feet by sixteen feet and was constructed four or five years ago using rock, cribs and wolmonized lumber with cedar decking. Another dock measures twenty feet by twenty-eight feet and contains a slip.

Mrs. Broadley indicated that she and her family have removed logs and debris from the dam site over the years, particularly debris brought to the site by beavers.

Mrs. Broadley gave extensive evidence on the action taken by the association in her term of office in an attempt to resolve the conflict between the landowners on the lake. These are not set out as they do not assist in determining the issues of the matter in question.

Mrs. Broadley expressed six areas of concern. Firstly, she was concerned that the public dock and the access to the lake which was repaired last year would not receive further repairs by the municipality. Secondly, her family bought with the concepts of certain levels of water and built their cottages and docks having this level in mind. Thirdly, it would be necessary to lower their docks as they would be too high out of the water if the water level were lowered. Fourthly, she was concerned regarding additional hazards in dark and stormy weather. It is necessary in such weather for persons coming to their cottage to paddle their boats into the dock as experience has shown that rocks are hit even with canoes. She also mentioned difficulty in manoeuvring sailboats, particularly in wind conditions. Fifthly, she was concerned regarding the possibility of higher acidity of the water but she admitted that she had no scientific information on this point. Sixthly and lastly, she expressed a wish that the cottage owners could live in harmony on the lake.

Alexander Hall Jeffrey, who resides at Kaministiquia, near Thunder Bay, and who owns a 600 foot parcel at the north end of the lake in respect of which the concerns have arisen gave evidence. The property had been previously owned by his father and he inherited the property following his father's death in 1961. The witness was born in 1949 and as a child spent most of the summer on the lake with his mother. His first recollections of the dam were when he was nine or ten years of age. At that time, he, his father and his brother used to go down and clear debris out of the outlet on one or two occasions each summer. This was an annual matter with perhaps some exceptions. He believed that a wooden structure had been put across the outlet by the association in 1961 or 1962 and viewed it the following summer. Following this activity the family was unhappy about the situation and noticed that the beach had disappeared and that the ground along the front of the property was washing away. When they were eleven and thirteen, he and his brother removed the wooden structure.

The witness's evidence was that usually in the spring there was a very narrow beach which widened in the summer to twelve or thirteen feet in width. After the erection of the wooden dam the water rose six or eight inches vertically upon the shore. The result was that the shore washed out, the ground disappeared and the vegetation along the shore disappeared. He indicated that it was his father's practice to keep the shubbery along the shore trimmed in order that a better view might be had of the children swimming and playing along the beach area and because this action helped to keep the blackflies in control.

The witness indicated that after the removal of the wooden dam the conditions along the beach returned to the condition that had been considered normal. In 1966 the Association put in a concrete dam. Prior to the dam the fluctuations of the water varied from the high water level at which it is now maintained to a depth probably ten but at least seven or eight inches below that level which was usually reached in August. After the construction of the concrete dam the level was held at a location six or eight inches up the bank. the result was that there was a continuous eating away of the bank notwithstanding attempts to build break walls, first with logs and later with rocks.

The witness's evidence was that the log breakwater had been installed in 1961 or 1962, when there was discussion regarding the construction of the wooden dam. With the construction of the concrete dam the logs sunk into the sand and a concrete break wall was constructed. It was satisfactory the first year but in the second year sunk into the sand. Thereafter large boulders were used as a protective device. These too were not 100 per cent effective and sunk into the earth. Additional rocks were added at intervals. Over the years three break walls had been constructed.

The witness's evidence was that the cottage was erected approximately fifteen feet from the water line. The break walls had been erected for a distance of approximately 150 feet of the total frontage of 600 feet and in the part immediately in front of the cottage. It was the witness's evidence that in the other parts

of the frontage the shoreline eroded and the shore disappeared. He also gave evidence that a path which led to the property of his brother, John Jeffrey, which is situate some distance to the west became soggy and swampy. He suggested that there was a disappearance of soil under the cabin in recent years and that this had increased since the construction of the dam. This required annual shimming of the cottage.

The cottage was constructed with piers as its foundation. The piers measured two feet by two feet and were placed on a rock foundation two feet below the ground level. These piers measured approximately fourteen to eighteen inches above the grade. Approximately twelve such piers support the cottage. In addition there was a large stone fireplace constructed on the ground level with the foundation that had been built at the time the cabin was erected. The witness was unable to say whether the foundation had been inserted into the ground. He was unsure as to what was happening to the fireplace and his brother John arranged for an expert to view the fireplace. It was the witness's evidence that the two piers under the centre of the cottage were sinking. He indicated that shimming to the extent of one foot or five or six inches had been necessary to keep the cottage level. Shims have been placed on other piers as well as these two in question.

The witness gave evidence that a large crack had developed in the fireplace from the firebox to the top of the fireplace. He indicated that he was not specifically aware of what caused this condition.

Other effects on the shoreline given in evidence were that the shoreline had originally been sandy. Trees are now falling into the water and there is a highly organic type of soil along the beach where it used to be firm. These parts of the beach have ceased to be desirable for walking.

With reference to soil structures, the witness's evidence was that there was a topsoil from one inch to three inches in depth. Under the topsoil there is a sand layer measuring three or four feet in depth. Underneath the sand there is a silt material that floats in water. This evidence was based on attempts to dig a

well and notwithstanding the placing of tile in the well the fines came in and plugged the well.

These wells have been discontinued.

The witness also gave evidence that there was subsidence at the front door of the cottage. There had been a small dock at this location which was referred to as a "toothbrush dock" because it was used for personal dental care. The steps to this area have become dislodged and displaced.

The witness also referred to a depression between the main cabin and a sleeping cabin to the west measuring approximately four or five feet by four or five inches. He indicated that this depression had occurred gradually.

The witness's evidence was that his father had agreed to the dam but it had been agreed to on the understanding that the property would not be affected by the raising of the water.

On cross-examination the witness indicated that there had been three feet of erosion immediately in front of the cabin and in other areas there was erosion to the extent of four to six feet.

On cross-examination by Mr. Davis, the witness stated that in the late fifties, before the wooden dam was constructed, the water was quite shallow for a considerable distance from the shore and the whole northerly end of the lake had a large beach. He indicated that the main and longer dock was constructed over an area that was sand for part of the year and the reason he gave for building the dock on the beach was that assisted in unloading boats and dragging boats up onto the shore. He stated that the width of the beach varied from one foot in the spring to twelve feet in midsummer and that there were sandbars beyond the water's edge which were covered with water in the spring or in periods of rainfall.

He again stated that the shoreline had receded at least three feet at the cottage and greater distances of four to six feet in areas where the Jeffreys had not installed erosion control devices.

The witness was also cross-examined on photographs from various areas which indicate that there is a greater depth of water at the north end of the lake than there was in some of the earlier

years. The witness suggested that there currently is water of 27 or 28 inches in depth where young children used to play prior to the erection of the dam.

The witness indicated that at one time his father replaced the long dock leading into the water with one that is ten to fifteen feet longer than the original dock. While there was no evidence as to the date of this reconstruction, his father died in 1961. The witness indicated that the reason for replacing the dock was that ice destroyed the former dock. Two things seem to follow from this evidence. Firstly, the reference to the dock in the 1960 documents probably had reference to the existing dock and secondly, that prior to the construction of the dam there were occasions when a dock was required to the existing shore and the depth of the water may have been higher at periods of time than is shown in some of the photographs. This concept is also supported by the photograph which was filed as Exhibit 42 mentioned above.

The witness stated that he understood that his father had concern regarding the levels of the waters because as children they had heard discussions of the problems and he expressed the view that even at the time his father signed the documents he had concerns. He indicated that his family had never wanted high water and from the beginning of their ownership of property on the lake were concerned with wave action along the shoreline. The witness agreed that there was more wave action on their shore than any other part of the lake as there was more wind in the direction of the north end of the lake.

With reference to the foundation for the fireplace, the witness indicated that he did not believe that a proper foundation had been constructed under the fireplace. Eaves troughs are not used on the building as they would be removed by the snow.

The witness indicated that his concerns in having his brother arrange for an expert to examine the property was the damage to the cottage, damage to the steps and erosion along the shore. He was unaware of the tests made by the expert but did receive a copy of the report.

When cross-examined as to the reason why no action was taken between the construction of dam and 1983 the witness indicated that he and his brother had been impressed by

his mother that the dam was legally in place and that it would be necessary for them to accept the dam. Accordingly, they were of the opinion that they had no legal right to touch the dam. He also admitted that he had nothing to substantiate his alleged three to six feet of erosion in places other than his observations.

The witness confirmed that there were no streams or wells under the cottage. There was a well constructed beside the cottage which was last used in the sixties and it measure approximately five feet in depth. By reason of siltation, the well could not be used. The witness's evidence was that the water table was found to be approximately three feet below the surface both in digging these wells and digging trenches for pipes to the lake for an alternate supply of water.

The witness admitted that no engineering advice had been obtained in constructing the wooden or the rock break walls.

When asked regarding the location of the document signed in 1960, he indicated that he had no specific knowledge of either marks referred to in the document. and had no idea where such marks are or were. The witness also admitted that he had seen no evidence of significant erosion on any other properties on the lake.

On re-examination the witness indicated that it was only in 1983 that he learned that the dam was not legally authorized and his action at that time was based on the unauthorized aspect of the dam.

Elizabeth Sarah Duchart, the mother of Alexander and John Jeffrey gave evidence that she and her husband owned the first summer resort locations on the lake, having come to the lake in the summer of 1944. She indicated that they were attracted to the area because of the beautiful beach and having three small children this was important. The beach measured twelve to fifteen feet in late summer and there were sandbanks or points of sand running into the water from the beaches. The entire 600 feet in front of the two properties had a similar sandy bottom.

Mrs. Duchart gave evidence that the cottage was built in 1945 on the road allowance following the advice of the local "fire ranger" that there would be no difficulty in building on a road allowance. The cottage was built by Lloyd Green who put in a "basement" for a fireplace. The fireplace was erected in 1965 by a stonemason from the Bracebridge area.

Mrs. Duchart's evidence was that following the construction of the dam the width of the beach decreased. With the original dam there was some loss but the concrete dam was higher and caused a greater difference with the result that there currently is no significant beach along the property. She also indicated that they had never had any difficulty with the use of their docks either in respect of the depth of water or the bringing in or taking out of their boats or in respect of the bumping of the dock.

The witness indicated that when Lloyd Green became an owner on the lake he took steps to block the outlet of the lake with logs and other debris with the objective expounded by him of assisting the creation of spawning beds. She indicated that lake trout was the only species that had been caught prior to the construction of the dam and that the dam did not improve fishing particularly as there was increased pressure from additional cottage owners. She also indicated that there had been an abundance of wildlife including loons, ducks, herons and deer which fed on lily pads along the shore. She gave evidence that loons had nested on the island adjacent to the Hay property and although there are fewer loons on the lake there still are such species.

The witness produced as Exhibit 57 a binder of photographs and comments prepared by John Jeffrey indicating different elevations of water between the periods before and after dam construction and evidence of recession of the shoreline, erosion of the shoreline, the falling of trees and the change of the shoreline from a sloping shoreline to a bank. With reference to Exhibit 16, the witness stated that she and her previous husband were not in favour of any dam but reluctantly agreed to a small dam. Reference was made to the notation of "6 inches" in ink and the balance of the document being in pencil. The witness indicated that the discussions had been to the effect that the dam would be four or five inches in height.

The witness indicated that following the original construction of the dam there was no serious problem the first summer but thereafter the problems began. Inquiries were made at the then Department of Lands and Forests and they were advised that no authority had been given for the erection of the dam. She and her husband indicated that they would remove the dam but the other landowners that had erected the dam, namely, the Greens, Dawsons, Steeles and Yeagers indicated that they had obtained permission to construct the dam and the Jeffreys would be sued if they removed the dam. She made further inquiries at the department and not receiving any information, assumed that the dam had been approved.

Mrs. Duchart's evidence was that while there were hazards in the lake these hazards are being overemphasized and that in their experience before the construction of the dam, they did not hit rocks. In this regard it may be noted that the property is the furthest property from the public landing.

John Denison Jeffrey, a brother of Alexander Hall Jeffrey, gave evidence confirming the evidence of his brother and his mother. He owns a cottage property to the west of the property of his brother which is situate in effect at the northwest corner of the lake. He has attended the lake every summer since he was three weeks old, frequently spending six to eight weeks per summer on the lake. This witness is a dentist and has had a pilot's licence since 1976.

The witness produced as Exhibit 58 a review of the topography of the area indicating that the lake is fed by springs and run-offs and drains by an outlet at the southeast corner into Clinton Creek which ultimately flows into the Lake of Bays. The document shows approximately six areas in the lake that are affected by rocks, boulders and shoals and provides a description of each of the areas. The thrust of the evidence is that the depth of water is such that a differentiation of six to nine inches would have little difference on the hazardness of the rocks to navigation. Included in the exhibit is a copy of the map prepared by the Department of Lands and Forests in the mid-fifties showing water temperatures and water depths in the lake. Also included

is a sketch of the dam showing the measurements of the dam. The most significant measurement is the measurement of 26.5 centimetres from the top of the dam to the lowest part of the easterly portion of the dam. This measurement converts to approximately 10.5 inches.

The exhibit also shows debris gathered in the vicinity of the outlet of the lake and the area downstream of the dam which, according to the witness's evidence, dries up in the summertime to a greater extent than it did before the construction of the dam.

The witness, his sister, Alice Helen Masson, and Calvin Lawson took a series of measurements of water at a number of docks on the lake and the information is contained in Exhibit 60. The measurements also included the distance between the shoreline and a point at which the water reaches a depth of ten inches. This measurement would reflect the amount of exposed bed that would occur if the water level dropped ten inches. The measurements are summarized on pp. 2, 3, 4, 5 and 6 of the report and indicate that there is a substantial amount of water at most cottages for boat docking but that adjustments, either in the depth of the cribs, the location of the docks or the creation of steps would be necessary to adjust to a lower water level. With reference to exposed shoreline, the measurements vary from 0 to 10 feet with the exception of the Alexander Jeffrey lot where the distance is 38 feet.

The witness gave evidence that underneath his brother's cottage the ground had dropped. He referred to areas where the wooden piers had been nailed to the cottage and there are vacant spaces between the piers and the ground. He also indicated that there was subsidence at the shoreline in the vicinity of the "toothbrush" dock. Further he gave evidence that there was subsidence in the area between the main cottage and the sleeping cabin to the west of the main cottage. He referred to the exposure of tree roots and the covering of the area with water and the appearance of the land having sunk. He also indicated that a crack has appeared in the fireplace although he was not aware of the scientific cause of the crack. He felt that the crack could have been caused by movement of the cottage or the foundation. He referred to the need to shim the piers under the cottage at annual intervals.

The witness had obtained an estimate from Bert. French & Son Limited, contractors of Port Sidney, Ontario, in respect of repairing or moving the cottage. The cheaper estimate was the construction of new supports through 16 inch square concrete piers on 36 inch square pads at a price of \$7,960 which included excavation, backfilling and drainage tile. This estimate was conditional on access being obtainable over land rather than across the water. An estimate to move the cottage a further fifty feet from the lake was obtained including the installation of piers and the removal of the fireplace from the cottage as it cannot be moved was \$10,666 for moving the cottage and \$6,000 to rebuild a new brick fireplace. The estimate included an item of \$16,000 for the building of a gabion wall 300 feet long as a break wall. The existing protection has been provided over a 600 foot area and the witness assumed that such a wall would cost \$32,000. This estimate was dated November 26, 1984.

The witness indicated that after the changes in the property became apparent to hi8 and his brother in 1963, they made inquiries and determined that. the dam which they had previously believed to have been authorized was not so authorized and took steps to deal with the matter through the Association. These matters not being fruitful, he, on behalf of his brother, engaged in Victor Francis Wilcox, an expert in soils, to view the property in the fall of 1984.

During cross-examination, the witness indicated that he had discussed the six inch measurement mentioned in Exhibit 16 in 1972 with Bert Green and David Hay, both of whom were unable to advise him as to the location of the marks either on the Jeffrey dock, the Green dock or on the shoreline. Both were alleged to have admitted to him that they did not know whether any marks had been placed to mark the six inch elevation. He stated that he did not ask Lloyd Green directly as to where the mark was on his property but he recalled Bert Green asking Lloyd Green regarding the location of the mark and Lloyd Green replying that he did not know. It was suggested that Kenneth Jarratt volunteered that he knew of the existence of a mark but that he could not identify the location. The witness stated that he asked Jarratt at the meeting but Jarratt

could not advise him. The evidence was that after heated discussions Jarratt took the position that he did not know where the mark was. The witness stated that this occurred at a general meeting of the year 1983 or the year 1984.

On questioning by the tribunal, the witness indicated that there had for many years been grass behind, beside and in front of the main cottage owned by Alexander H. Jeffrey and that there was a 200 foot area behind the cottage which is flat and was grassed in 1967. He also indicated that the distance between the cottage and the breakwater is 10 to 14 feet.

Victor Francis Wilcox, B.Sc. P.Eng. was called as an expert witness on behalf of the Jeffreys. Mr. Wilcox graduated from the University of Toronto in 1952 with a Bachelor of Science degree. He immediately acquired a company named Trade Engineering Company Limited and has operated it since that time. He holds a certificate as a consulting engineer under the Ontario Professional Engineers Association system.

Mr. Wilcox operates a subsidiary of Trade Engineering Company Limited known as Barrie Inspection & Testing Limited. While the parent company deals primarily with matters of design, the subsidiary deals with field services including work related to soils and concrete. The area of activity relates to inspections and reports of buildings damaged by fire, tornados and other hazards. Included in the area of activity of the subsidiary are matters of soil evaluation. Examples of projects designed by the witness were inground septic disposal systems.

The witness approached the problem from the point of view of the bearing capacity of the soil of the road allowance in front of Alexander M. Jeffrey's cottage and the influence of the water table. He stated that the bearing capacity of soil is based on three matters, namely, its structural makeup, its water content and its density. He was unable to bring equipment to the property to test the third aspect but had regard to the first two. With reference to makeup, the witness pointed out that there is a range of size of soil particle varying from solid rock to clays and

silts and that the bearing capacity reduces with the size of the grains of the soil. With reference to water content, the witness advised that the water content had no effect up to a level of ten per cent moisture but thereafter the bearing capacity decreases as moisture increases.

The witness made a field inspection of the Alexander H. Jeffrey property in the middle of August, 1984. He attended on the site with John D. Jeffrey and gained access to the site from the landing area on John D. Jeffrey's boat. He made a number of assumptions in respect of the property based on information provided his by John D. Jeffrey. He reviewed the entire lake noting that there were no rivers or streams consistently feeding the lake which was flanked on two sides with Laurentian Shield ridges. He made a brief inspection of the entire lake noting that there were areas of cold spots in the water, particularly behind Jarratt Island where he was advised that ice rarely formed in the winter conditions. Similar conditions were noted in other areas.

The witness attended at the site in question. He "looked" under the cottage. He was interested in areas of depression on various spots on the property some of which were close to the shore and others which were a considerable distance, namely, 60 feet from the shore. He accepted John D. Jeffrey's evidence that these were of recent origin. He noted that the cottage was subsiding although he did not retain earlier photographs which he had been shown. He accepted the information provided by John D. Jeffrey regarding the soil conditions in the wells that had been dug in the sixties. He notes that there was organic soil on the surface and some washed sand underneath containing coarse grains. He accepted Jeffrey's advice that silt and sand occurred at a four foot level as he had no method of checking at such levels. He concluded that the upper layers of soil had a greater permeability than the lower soils. He accepted John D. Jeffrey's evidence that there was a ten inch raise in the level of the lake as a result of the construction of the dam.

The witness's report to Dr. John Jeffrey dated September 17, 1984 was filed a.  
Exhibit. 69.

The witness reported areas of what he referred to as subsidence at the toothbrush dock, at the right or easterly side of the cottage, to the west of the cottage on the path to John D. Jeffrey's cottage and in one area under the cottage itself. He noted the size of the piers under the cottage but he made no attempts to determine their depths below surface.

The witness's theory was that with the raising of the lake by ten inches the water table of the surrounding land also increased by ten inches with the result that with the increased water content of the soil immediately adjacent to the piers there was subsidence by reason of the reduction of the bearing capacity of the soil on which the piers were constructed. The witness noted that the fireplace did not seem to have started to subside. His explanation for this was that the foundation of the fireplace probably was shallower than the depths of the portion of the piers within the ground and accordingly, there would be less effect from the increased moisture content of the soil immediately below the fireplace.

The witness also theorized that small subterranean channels had been created which would carry the soil from its location on the land above the shore to the outlet of the underground streams where cold water was observed and with the removal of these underground particles the subsidence on other parts of the property occurred.

It was the witness's view that the only way of satisfactorily dealing with the problems associated with the Alexander H. Jeffrey property was the removal of the dam. The enlargement of piers would be costly and would not have any effect on reduction of the shoreline erosion. He referred to gabions and other methods of shoreline protection such as sheet piling and pointed out that these systems are not particularly effective and are very costly. It was his opinion that the removal of the dam was the only solution to all of the problems that are occurring.

On cross-examination it was brought out that the witness was not a member of any geotechnical society and was not recognized as a geotechnical engineer by the Ontario Professional

Engineers Association. The witness's view was that his knowledge of soils was gained from self-teaching and experience. During cross-examination an alternative cause of the change in the level of the cottage was suggested, namely, frost heave. The witness was of the opinion that due to the depth of snow in the area which he, of course assumed, it would be unlikely that frost heave was the cause of the changes in the level of the cottage.

Alice Helen Masson, a sister of John D. and Alexander H. Jeffrey gave evidence confirming the disappearance of soil along the front of the Alexander H. Jeffrey property. She also confirmed her role in the taking of measurements that were shown in Exhibit 60.

David S. Hawkins, who owns part of Lot 9 in Concession V, which is situate in the central part of the westerly side of the lake gave evidence that he acquired his property in 1979. He has approximately 140 feet of shoreline which is partly rock and partly earth and bank. He has noted in the last two or three years erosion of the earth and bank and undermining of part of the bank. It was his view that the water should be lowered as it would prevent the erosion which is occurring to his bank and provide an area of beach for the use of children. The only concern that he had regarding the lowering of the water was the effect on the public dock and his view was that it had been dug out in the past and could be dug out again. As an alternative, a floating dock could be added at the end of the existing public dock.

This witness expressed the view that the lowering of the water would have little effect on other cottages on the lake and he had no feeling that great hardship would occur to any cottage owner if such were done. He felt that docks were the main problem and that an area in the vicinity of David Hay's property might become swampy if the water level were lowered. He did not see any concerns regarding navigation and suggested that if in fact the lowering caused more dangerous situations they could be marked. He indicated that the most likely area for any concern would be in the southwest corner of the lake which is only used by those persons having cottages in that area.

This witness is a pilot and he has landed on the lake with a small float aircraft. He does not foresee any problems for aircraft. if the water is lowered.

A letter dated October 16, 1985 from Louise H. Hawkins was filed as Exhibit 74. The letter refers to her recollections of the Alexander H. Jeffrey cottage as a child and her observations of change in 1979 when she returned to the lake. The letter indicates change in the beach, the erosion of the water's edge and the growth of more marsh grass and green material in areas where none was previously present. The letter also indicates that it was not possible to walk out as far into the water as had been previously possible without encountering a muddy bottom.

Exhibit 75 was a letter from Diane J. Griffen, the Clerk-Treasurer of the Township of Sherborne, McClintock, Livingston, Lawrence and Nightingale. This letter was filed by Mr. Davis and expresses inability to attend the meeting by reason of conflicting dates of council meetings. Attached to the letter is a statement of the concern with regard to the public dock indicating a need for continued dredging if the water is lowered and the possibility that the dock would become unusable in the event the dam were removed.

Gregory Alfred Deyne, the District Biologist of the Ministry of Natural Resources of the Bracebridge District who has had approximately ten years experience in fish and wildlife matters gave evidence on the Ministry's position regarding the dam. The only area of concern expressed by the witness was the time of removal of the dam if such is to occur. His position was that this should occur about March 20 in any year in order that the incubation of the eggs laid in the previous fall would not be interfered with by exposure. On the issue of whether the lowering of the dam would create a loss of habitat, the witness stated that at the outset the removal of water usually creates a loss of fish habitat but such a principle is difficult to quantify in any instance. The foremost consideration is the fact that the lake has existed for thousands of years without a dam and prior to the dam provided good fishing according to the evidence. The witness pointed out that the effect of lowering water could create exposed shoreline or more appropriately exposed bed of the

lake but such changes often have short-term effects: There may be new vegetation or new or different species appear but these changes are not significant. Such changes are frequently created by the action of nature herself through beaver constructing dams.

The witness pointed out the detrimental effect of the removal of rocks along the shoreline for the construction of cribs. Such rocks may be used in spawning programs. They provide cover for bait fish and areas for the growth of food for smaller organisms which are part of the food chain of fish.

Reference was made to a 1981 report of D.B. Chapple, a contract technician who prepared a study of Clinto Lake, based on data taken in May of that year. The witness had some reservations regarding a statement in the abstract on p. 1 of the report which indicates that in the summer months lake trout are restricted to 29 per cent of the total lake.

The position of the witness was that as a Ministry official he had no concern if the elevation of the lake were lowered. In fact, he referred to the possibility of the lowering of the lake by one foot creating a decrease in water temperature. The witness pointed out that it was not unlikely that the raising of the waters created areas of shallow water which would heat up in the summer months quicker than the lake in its normal condition and would increase the temperature of the lake as a whole. When asked if there were any element of benefit arising from a consistent water level, the witness pointed out that the normal outlet provided an equally consistent level and that the existence of the dam does not change the fact that a consistent elevation could be maintained.

The witness had observed one known spawning area where spawning had occurred in a depth of 1 to 1.5 metres and he was satisfied that a drawdown of one foot would not affect spawning. It was also pointed out that Exhibit 61 indicated several areas of potential spawning, many of which may be at lower elevations than the shoal in question, which is at the south end of Jarratt island. These areas had not been examined and as they may be of lower elevations they would similarly not be affected by a lowering of the water.

The witness was questioned regarding the existence of a dock on the spawning grounds on Jarratt Island. While the dock may provide some measure of cover for spawning fish, the witness was of the opinion that it would be better if the fish were not exposed to the human activity.

When asked if the population of lake trout in the lake was affected by the increase in water level, the witness indicated that there was not sufficient sampling to answer the question. However, the available evidence indicates that there is not. A normal age and size structure of the fish. In the opinion of the witness this situation was related to exploitation and unknown water qualities which may be related to unknown effects of acid rain. He also indicated that competition from other species may be causing difficulties for lake trout. However, it was his opinion that the lowering of the water would not create an additional stress on the lake trout population.

The witness indicated that from the point of view of fish management it is a better approach to manage the fishery in a natural setting than to attempt to deal with man-made effects such as the result of the construction of the dam.

With reference to changes of other wildlife species, the witness was of the opinion that there could be short-term changes and effects but that in the long run there would be no serious problems resulting from the lowering of the water.

William John McMullen. B.Sc., the Water Management Engineer of the Engineering Services Branch of the Algonquin Region of the Ministry of Natural Resources, who has a degree in engineering from the University of Toronto and has taken a postgraduate course in hydrology and water resources engineering at the University of Guelph, indicated that he was the author of the memorandum of Paul Stephen that was filed as Exhibit 78. He clarified several typographical errors in the memorandum and qualified his statement regarding the absence of evidence of active erosion so that condition should be limited to the time of the Inspection. He

indicated that with the protective devices such as logs and rocks there were no signs of turbidity, silting or sedimentation which would indicate active erosion. With reference to the extent of benefits arising from the dam, the witness pointed out that while some of the rocks might be made less hazardous to navigation, other rocks which are obvious could become greater hazards with a greater depth of water which would create a difficulty in observing the rock.

On cross-examination, the witness indicated that he had observed the depressions on the ground both in the cleared portion of the Jeffrey property and behind the cleared portion but he had no explanation of the cause of the depressions. When cross-examined regarding cold spots in the water the witness indicated that they had not been drawn to his attention. It was his view that while he was not a soil expert, the usual effect of raising the level of water over lake bed springs is to reduce the flow from the spring rather than increase the flow. He categorized the suggestion of the subterranean movement of fines as being in the area of possibility and suggested that there may have been other factors that would have caused increased flow than the increased head on the springs.

When cross-examined in respect of erosion, the witness indicated that he had not examined the areas beyond the protective works erected by the Jeffreys but he had noticed heavy bush on those areas. With reference to the cause of the depressions in the ground he indicated that he was not in a position to confirm in one way or another the cause of such depressions.

By way of reply evidence, Mr. Davis called a number of other witnesses. The first witness was Ivan Powell Liczkowazky, P.Eng, who was a graduate in civil engineering from the University of Toronto in 1959 and who has taken postgraduate studies at the University of Toronto in 1961 and 1962 in such courses as advanced soil mechanics, advanced foundations and Pleistocene geology. Other special courses have been taken at the University of Waterloo, M.I.T. and Laval University. The witness holds membership in many organizations related to geotechnical matters and has had a broad experience dealing with specific projects as a practising geotechnical engineer.

The witness visited the Jeffrey property on November 1, 1985. He made a number of measurements and took a soil sample from a test pit located between the cottage and the dock. In so doing he dug a hole two and one half feet deep and took a sample at two feet. He was satisfied that the sample was indicative of the soil in the entire hole. The soil sample was taken to a laboratory and a grain-size analysis was done on the sample. The witness also examined a number of coloured photographs of the shoreline that had been provided to him by one of the cottage owners. He also reviewed Mr. Wilcox's report and accepted certain findings of fact contained in the report such as the raising of the water ten inches by the dam the ground level being thirty inches above the lake and the water table being at the same elevation under the ground as the top of the lake or as the lake level. He accepted the statement that the footings of the cottage were two feet below ground level as he had no opportunity of digging around the piers.

The witness did not agree with the categorization of the soil below the organic level as being beach sand. His analysis showed that the soil was a granular material composed primarily of silt. It was approximately seventy per cent silt and thirty per cent fine sand. However, he stated that this distinction should not affect the bearing capacity of the soil.

On the issue of whether or not there as settlement, the witness adopted the view that h. had not attempted to prove or disprove whether a movement under the cottage was created by settlement or heaving. He felt that such a matter required measurements over a long period of time to determine whether there was a movement and whether it was caused by settlement or heaving. His objective was to determine whether a ten inch raise in the level of the lake would seriously affect the bearing capacity of the soil, whether settlement would be expected and when it would be expected.

The witness disagreed with Mr. Wilcox's statement that the bearing capacity of soil varies with changes in moisture content. His position was that this statement was only true in a general sense. He stated that looser soil will always have a higher moisture content at saturation

than a more dense soil and it is only in this sense that there is any tie in between moisture content and bearing capacity. In his view there is no decrease in bearing capacity when a partially saturated soil is increased to full saturation.

The witness's evidence was that the raising of the water table has a theoretical but little effect on the bearing capacity of soil. The witness explained this against the background of the piers under the cottage. He indicated that these piers carry a load and that the load tends to push the piers into the ground. If the load on the piers is small, the only result is a slight compression of the ground and a slight settlement under the pier. If the load increases to a point that the soil is brought into failure, there will be a greater "punching" into the ground and a tendency to push aside the soil that surrounds the pier. This displacement is resisted by the shear strength of the soil.

The witness indicated that there are two principles of the laws of physics involved in this matter. Firstly, he referred to the Archimedes' principle, under which a body submerged in water loses weight by the weight of the water displaced at the rate of 62.5 pounds per cubic foot. The second principle is a principle that as the soil is displaced it is sheered along the plane and the resistance on that plane will depend on the weight of the material above that plane. This principle was illustrated by the sliding of a glass along a desk and an indication that with a greater weight in the glass, the ability to move the glass sideways is decreased. The witness stated that a similar result occurs to the soil under the piers. When the piers are under pressure there is a tendency to displace the soil. The difficulty or the ease with which such displacement occurs depends on the weight above the plane. If the water level is raised, the weight of the soil is reduced and the frictional resistance is decreased. In this sense only is there an effect on the bearing capacity of the soil and in the witness's opinion the raise of ten inches in the water table would have little effect on the bearing capacity of the soil under the piers in question.

The witness outlined an analytical assessment of the changes resulting from the raise in the water table of ten inches. His calculations are contained in Enclosure 1 of his report to Mr. Davis which was filed as Exhibit 84. His conclusion was that such a raise in the water table would result in a decrease in the bearing capacity of the soil of thirteen per cent. This percentage is significantly smaller than the fifty per cent decrease suggested by Mr. Wilcox and in this witness's opinion the estimate of fifty per cent is not accurate.

The witness also referred to evidence given by Alexander H. Jeffrey wherein he indicated that in the spring prior to the construction of the dam the water levels had reached the elevation at which they are now held by the dam. If such were the case conditions creating settlement from saturation of the soil adjacent to the piers should have occurred a long time ago. Further, the witness assumed that in the spring the ground would be completely saturated and that there would have been many opportunities long before the construction of the dam for settlement to have occurred if such were the cause of the changes in elevation.

With reference to the time involved for settlement to occur, the witness indicated that such settlement, where it does occur, takes place in a very few hours. The witness indicated that in the geotechnical science, there is no principle of accelerating settlement, with the exception of cases of landslides. The normal situation is that there is a reduction in the rate of settlement and an increasing rate of settlement as Mr. Wilcox indicated is inconsistent with geotechnical principles.

The witness also disagreed with a suggestion by Mr. Wilcox that there was leaching and removal of soil particles through underground subterranean channels causing ground movement. He indicated that Mr. Wilcox was discussing two types of erosion, namely, the erosion as a result of the waves on the lake and secondly, a subterranean movement of soil. With reference to the first class of erosion the witness indicated that he would have no objection to an enunciation that the increased water level created erosion. His evidence was that he would be surprised if

erosion did not occur. He indicated that the real issues are the severity of the erosion and the rate of the erosion. The witness produced three photographs and concluded from his observation on the ground and the photographs that there was not a serious erosion problem. He indicated that there was no evidence at the time the photographs were taken of any erosion occurring although he would be surprised if such were the situation. He referred to the evidence of reeds growing in the lake near the dock and indicated that this evidence is a sign that erosion is periodic. In his opinion this indicated that there was deposition of soils rather than an erosion of soils as reeds are not normally found in areas that are subject to active erosion. The witness defined deposition as being the return of soil that had been carried out into the lake by higher waves during more serious storms to calm areas by lower waves of less serious storms. The witness defined erosion as being the movement of soil away from the shoreline by much higher waves.

The witness indicated that he did not pay too much attention to the shoreline but did notice a portion protected by stone. The remaining area in front of the Jeffrey property was not protected and on first impression there appeared to be little difference in the two areas. He did not feel there was a great indentation or reduction of soil where no protection was provided. He concluded that the natural protection was doing as effective a job as the stone placed by the Jeffreys. He also referred to the clearing of shrubs by the Jeffreys. The witness, with reference to the evidence of Alexander H. Jeffrey that shrubs had been removed to provide a better view from the cottage, expressed the opinion that such action would have a negative effect on erosion, i.e. would activate or would create more active erosion than would have occurred without the action having been taken.

The witness's evidence was that he failed to see any evidence to indicate what is commonly called erosion. There was no evidence of caving banks or barren or exposed soils in the unprotected areas.

The witness dealt with the question of whether the raise of ten inches in the elevation of the waters of the lake would increase the erosive force of the waves. He indicated that he had calculated the height of waves for this lake assuming the fetch, i.e. the north to south distance on the lake, is one and one half miles and in an assumed velocity of fifty miles per hour there would be eighteen inch waves. He pointed out that in the scientific treatment of such matters there is no factor related to the depth of the water except in shallow water where the erosive effect of the waves is reduced by the frictional resistance of the bed of the lower areas. None of the tables establishing wave heights create any difference where the average depth of water is ten feet and a. Clinton Lake was above such average he concluded that there would be no increase in the erosive force of the waves before or after dam construction. However, he did indicate that the place of the application of the erosive force changed and that this force would be applied at a location ten inches higher than it had previously been applied.

This aspect is recognized by the report of the witness which was filed as Exhibit 84 at pp. 7 and 8 where the report reads,

There is no question that as a result of the higher water level there will be some loss in property and that the shoreline will recede further inland. This is simply due to the fact that land which was previously above the lake level will now be under water and that land which was previously outside the reach of the waves of the lake will now be subject to erosion. However, the rise in water level will not increase the erosive force of the lake nor will the soil be more erodible as it was before. The magnitude and the rate of shore erosion, therefore, should be the same as they were before the construction of the dam.

On questioning from the bench at the end of his evidence, the witness indicated that he felt that there would be a loss of approximately twelve feet of shoreline before a state of equilibrium would be achieved as a result of the erosive effects of the waves at the higher elevation.

With reference to subterranean or subsurface erosion the witness adopted the approach of the witness McMullen that there is need for a driving force for ground water to be

moved. This driving force would be the difference in elevation between the existing location of the water and the place of entry into the lake. If the level of the lake is raised the force can only be reduced and hence the construction of the dam should have a beneficial effect on this issue if it exists.

With reference to the depressions in the ground, the witness noted that there was some unevenness but it was not in the nature of a sink hole. He referred to the depressions as an irregular surface or bumps on the ground. He indicated that there was evidence that trees had been cut down and the root systems had been left in the ground. There could have been a heaving of these root systems or of boulders which would work their way up creating unevenness in the ground.

With reference to the piers under the cottage the witness noticed that the southeasterly pier and the southwesterly pier of the cottage had been pushed out of the ground. The construction of the piers was a rubble stone below ground and concrete blocks from the ground level to the top of the pier. In the instances where there was a movement it appeared that the rubble stone was two inches above the ground level which led the witness to the opinion that the pier had not sunk into the ground but had raised presumably by frost heaving. He gave his explanation of the process of frost heaving and the tribunal finds his explanation of frost heaving more acceptable than the explanation given by the previous witness. Inherent in his assessment of the frost heaving conditions was an analysis of the soil adjacent to the cottage and his analysis showed that this soil was not what was normally referred to as beach sand and was in fact a sand that was extremely frost susceptible. He also indicated that the soil in the bed of the lake was of a similar nature. In this regard it is also to be noted that the concept of frost heaving is consistent with the evidence of Alexander H. Jeffrey who indicated that the piers that had been constructed of wood and had been nailed to the joists of the cottage were above the ground level, i.e. that there was a space between the bottom of the wooden pier and the ground.

The witness's conclusion was that the raising of the water ten inches had no effect on the bearing capacity of the soil so as to cause settlement and should have a beneficial, if any, effect on subsurface erosion. He pointed out that there would be no change in erosion other than it would occur at a different location.

When questioned on cross-examination regarding the adequacy of the existing protection, the witness expressed the view that stabilization of the shoreline would depend on the adequacy of the protective devices. He indicated that it appears from the evidence that he has seen that the protective devices have been effective. When it was pointed out to the witness that there has been constant backfilling, the witness indicated that vegetation was the best method of protection. He indicated that the protective devices must be such that they retain the fine materials behind the protective device and that wooden planks would not be sufficient for this purpose. He also commented that there were problems respecting foundations for protective devices and that riprap is the best device as it finds its own level by continually sinking into the ground and required replacement of the rocks at the higher levels.

When cross-examined by Mr. Thomson on the issue of whether the piers had been subject to settlement or heaving, the witness explained the issue of timing by contrasting the time of settlement with the time of heaving. He indicated that, empirically, the heaving process does not commence immediately and there usually is a period of stability prior to the heaving process commencing. He referred to the example of fenceposts which often remain in their original location for a long period of time and suddenly rise out of the ground due to frost heave.

With reference to the term "beach sand", the witness pointed out that this was a layman's term perhaps used primarily in connection with soil laid down by lake action. He pointed out that such soils vary in size from silt to large grains. He would not characterize it as a sand as there was a too fine or silty content. The witness indicated that the distinction between the two types of soil was difficult for laymen or inexperienced geotechnical engineers and that with his

broad experience he has developed some ability to make the distinction without the need of a test. He indicated that he made his conclusions prior to the results of the tests and the tests that he did make confirmed his conclusions.

With reference to frost heave, the witness reviewed the process of frost heave and concluded that a raise in the elevation of the water table should reduce the risk of frost heave. The witness admitted that it was puzzling that frost heave did not occur before 1978 but indicated that the situation may have been that the piers returned to their normal position in the early years and that once series of slight changes are accumulated the change becomes more progressive.

With reference to wave erosion, the witness agreed that wave action would be more effective on the vertical elope than on a sloping shoreline. However, he did point out that the erosive force comes from the breaking of the wave. Where the water is raised ten inches on a beach that otherwise would be dry, the breaks in the wave would occur at the place where the heights of the wave exceeds the depth of the water and the serious erosive force would be applied not at the shoreline but to the bed of the lake. When it was pointed out to the witness that the evidence indicates that the water level reaches the bank during most of the year, the witness indicated that the magnitude of the force was not changed by the increase in the height of the water. What was not specifically brought out was that applying such theories if the heights of the waves were less than the depth of the water at the shoreline, the breaking point would be on the shoreline itself.

On re-examination the witness indicated that notwithstanding the fact that the weather was calm on the occasion that he observed the area, there was no evidence of short-term or long-term erosion which is frequently visible where such occurs and that there was evidence of stability, both in connection with the area in front of the Jeffrey cottage and in the areas to the east and the west thereof.

Mr. Davis called David Cameron Kerr, an Environmental Planner with the firm of Cumming-Cockburn and Associates, who has had training in broad areas of biology and has had extensive experience in the private sector in respect of impact studies. Mr. Kerr had obtained a copy of the 1981 report prepared by the Ministry and developed certain theories respecting the lake trout population. He admitted that the lake was a typical lake trout lake of the Algonquin region. He described the lake as being an oligotrophic lake which was low in productivity with little natural pollution, low weed production and having a clean clear pristine condition due primarily to the lack of nutrients in the water. He indicated that there were small holes with calcium deposits surrounding the holes which indicates a clear cold flow of water into the lake creating excellent habitat for lake trout.

The witness was critical of the Ministry's assessment of the lake trout population of the lake. The basis of his criticism was the use of the catch per unit effort as a measurement of the population. While the witness was critical of this approach, he failed to provide the tribunal with any alternative that the tribunal might use in considering the numbers of lake trout in the lake or to assess these numbers against the potential capacity of the lake in respect of population.

Based on information prepared from data provided by the Ministry, the witness presented a number of drawings that illustrate, based on the data provided, the range of strata in which lake trout could survive in the late summer months when the temperatures increase. Included in his calculations was a layer of oxygen depleted water at the bottom and a layer of water at the top in which the temperature is increased to more than fifteen degrees centigrade, the ideal temperature for lake trout habitat. The thrust of his presentation was that, based on a straight cross-section running from the southwest corner of the lake to the north end of the lake, the restricted band of ideal habitat would be reduced by six per cent, break the lake into two major parts and restrict the lake trout from moving from one part to the other. He disagreed with the premise of Mr. Deyne, the Ministry biologist that the increase in water elevations might increase the temperature of the water of the lake. He based his criticism of the Ministry's approach on the fact

that there are many steep shores around the lake and that there would be few areas where the increase in depth of water from the dam would be located in shallow areas. It was his view that the raising of the water would not only provide more habitat, particularly in the critical period as well as the remainder of the year and that with the lowering of the water by the removal of the dam, the area of ideal habitat would be so reduced that the trout would be limited to two small areas rather than a larger area with the result that the synergetic effect of the production from the two parts being greater than the production from the whole would be lost. The difficulty with this assessment is that the Ministry had failed to provide the witness with an earlier contour map that was of record in the Ministry, i.e. p. 7 of Exhibit 58 and it is apparent from this record of depth soundings that a theory based on a straight line is unsound as there are a number of "pathways" of lower elevations which would prevent the situation suggested by the witness from occurring.

The witness recommended against the removal of the dam on the theory that the dam increased the area of habitat in the critical period by six per cent or sixteen hectare metres of water volume, that the overall habitat was increased and that the higher water would provide a larger area in respect of each spawning bed on the lake. He pointed out that there are a limited number of spawning areas on the lake and that while lake trout are known to spawn in waters of less than one foot in depth and down to waters of 138 feet in depth, the only evidence before the tribunal was of one actual spawning area, namely, the area at the south end of Jarratt's Island, and that in respect of this spawning area, he was of the opinion that the additional ten inches of water significantly increased the spawning area. The witness questioned whether there were any significant spawning areas in any other parts of the lake. The witness also adopted the view that the weir type construction of the dam created a more stable water level than a natural outlet. He felt that this stability of the water was helpful, not only at the time of laying of the eggs but at the time of hatching of the fry and that a natural outlet with a V-notch would provide a greater degree of fluctuation which would cause eggs to be exposed and lost.

The witness admitted that it was difficult to make an assessment on the available data. He criticized the Ministry approach as being an application of general principles to Algonquin type lakes rather than the creation of a good clear impact study of the various factors normally considered in impact studies or that are required by some ministries or the government where impact studies are required to be submitted. He submitted that details of the bathometrics of the lake, the water quality and the existing population are not available and have not been considered in the Ministry's position and accordingly it is difficult to make any scientific assessment based on the data available. The tribunal might add to the list of missing factors the question of the need of spawning areas in relation to the capacity of the lake.

Mr. Davis recalled Mr. K. Jarratt, who produced two photographs purporting to indicate marks on the rocks on the shoreline of Jarratt's Island which were told to him to be the agreed elevation of the lake. With reference to these photographs, the tribunal does not find them to be particularly clear nor do they appear to show a very authoritative mark, whatever that would be. The hearsay nature of the existence of the marks and the lack of any indication of whether they are related to the six inch elevation or ten inch elevation or some other elevation that may have occurred in some year leaves the weight of these marks at a negligible level. The witness's evidence was that he had on no occasion discussed the existence of this mark with John Jeffrey and in particular he had not attended the annual meeting of the association held in 1983.

It was submitted on behalf of the Ministry that under subsection 11(4) of the Lakes and Rivers Improvement Act the purpose of the hearing is to assess whether the proposed action by the Ministry is "fair, sound and reasonably necessary for the purposes of the Act. It was submitted that there were two issues. The first issue is a legal issue of whether the dam and the increased water levels are the causes of the loss of beach, erosion and subsidence. The second issue is the legal issue of whether the existence of the dam is contrary to the purpose of the Act and, if not, whether it is fair, sound and reasonably necessary for the dam to be constructed. It was submitted

that at the time the application was made there was adequate and plenty of evidence that the dam was the cause of the loss of beach, erosion and subsidence as the Ministry had been provided with the Barrie report. It was submitted that, even with the evidence before the tribunal, the issue of loss of beach and erosion has not been disproved. With reference to settlement, the submission was that the Ministry was not convinced in any way of any causal relationship.

Reference was made to the clauses of section 2 of the Lakes and Rivers Improvement Act in respect of the matters to be dealt with in making a report to the Minister. It was submitted that there was clear evidence that the dam was interfering with the "preservation of the natural amenities of" the shores and the waters of Clinto Lake contrary to clause (d). It was submitted that the loss of the beach and the shore erosion is caused by the dam and the increased levels of the water. With reference to clause (c), the Ministry submitted that it was its view that the raising or lowering of the water has no measurable impact on the fish population. With reference to clause (a), it was submitted that the lowering of the water by ten inches in no way affected public rights of navigation and there was no significant effect or a possible increase in hazard from the lowering of the water. The greatest reliance was placed on clause (b) which deals with the rights of riparian owners. It was argued that the owner of a summer resort location purchased from the Crown is entitled to the same consideration as a riparian owner, particularly as in this case the cottage owner is in the process of acquiring the road allowance. It was submitted that the cottage owner has, if not legally, in fact, an interest in the shore, the beach and the adjacent trees and that these things should be protected. The Ministry submitted that the phrase "riparian owner" should be interpreted in its widest sense and include littoral owners as well as riparian owners.

With reference to the matter of fairness, it was submitted that the Ministry's position was that if there had been consensus they would have granted the rights to construct the dam. However, in the absence of complete consensus, the Ministry was not prepared to adopt the view that the majority interest should create a right to prevail over the rights or at least interests of a

riparian owner. It was submitted that the provisions under consideration were placed in the Lakes and Rivers Improvement Act as a result of the McRuer Commission on Civil Rights. The thrust of this report was to emphasize the rights of the individual as contrasted with the rights of the public generally and it is consistent with the interpretation of the report and the legislation that followed the report that the interest of the Jeffreys should not be affected by the granting of approval to construct the dam.

Mr. Thomson submitted that while the formal matter dealt with an approval after the fact of the location and the plans and specifications of a dam the real issue was whether the dam should be removed and the tribunal should make a recommendation on this aspect of the Case. In this regard it may be noted that the position of the Crown varied and the tribunal can only assume an area of jurisdiction in accordance with the provisions of the Act and the reference from the Minister.

Mr. Thomson dealt with three matters that were expressed to be the concerns of the cottage owners in the event the dam were removed, namely, hazards to navigation, reduction of use of the public dock and the quality of water for fishing. On the first subject, it was submitted that the evidence of John D. Jeffrey was the most satisfactory evidence regarding the alleged hazards in the lake. The evidence indicated that there are six areas of potential difficulty and it was submitted that the measurements taken of these areas and of the docks do not indicate a significant problem in the event the dam were removed. It was submitted that there was no concrete evidence of any actual increase in hazards that do not now exist and any increase in existing hazards should, even under present circumstances, be more adequately marked.

With reference to the public dock, it was submitted that this dock from its original construction has been unsatisfactory. It was said that its location is in a spot in which there is low water and serious hazards on one side of the dock. It was submitted that the lowering of the water would not seriously effect these matters and that the present remedy of dredging could be

continued even with a lower elevation of water. It was submitted that the public dock was a neutral area which has always been a problem and should not be relevant to the issue.

With reference to the issue of water quality for fishing it was submitted that there was no evidence which could quantify the effect on fish or other wildlife particularly in a situation where beaver dams over the years have changed the elevation of the lake. Reference was made to the evidence respecting the ability of fish and wildlife to adapt. Reference was made to the absence of evidence to show any quantified adverse effect on either fish or other wildlife from the removal of the dam. It was submitted that the evidence of the expert witness from the Ministry was preferable to the evidence offered in reply as the latter was clearly designed to point out the worst possible position if the water were lowered. It was submitted that the charts presented to the tribunal were designed solely for the effect to attempt to establish that the preferred habitat for lake trout would be affected and it was pointed out that these charts were based on a cross-section which is inconsistent with other evidence. It was submitted that the appropriate finding of fact would be that there would be no harmful effects from the lowering of the water.

It was submitted that in contrast the damage that is being sustained by the Jeffrey property is serious and significant. It was submitted that there was plenty of evidence to establish existing reduction of shoreline and beach due to erosion. It was pointed out that even the expert witness called in reply admitted that there would be erosion and he coupled this with a preventative program, which in the past has proven to be ineffective as the installations have sunk into the ground. It was suggested that this approach was not only inconvenient but it did not solve the problem. Reference was made to the risk of twelve feet of encroachment mentioned in the evidence of the expert, Mr. Lieszkowszky. Reference was made to the stability over a fifteen year period prior to the construction of the dam and the subsequent effects after the construction of the various dams.

With reference to the settling of the cottage on the Jeffrey property, it was submitted that as the deterioration of the structure and its foundation was not observed until 1978 and had been intact for thirty years previous thereto, the evidence of subsidence of the soil and the piers under the cottage should be accepted. It was the submission that it should be found that the cause of the subsidence was the higher water levels and that the evidence of Mr. Wilcox established a base for such a conclusion, and that the Wilcox theory of the higher water level creating leaching of finer materials through subterraneous channels should be accepted. Reference was made to Exhibit 63 showing the estimated cost of carrying out the remedial action recommended by Mr. Wilcox, showing a cost of \$32,000 to move the cottage fifty feet from the lake and construct a new fireplace and a gabion wall 300 feet long. If the entire property was fronted with such a wall there would be an additional \$16,000 required. In passing it may be noted that the same estimate contained an item of \$7,960 for revising the supports on the cottage at its existing location including excavation, backfilling and drainage tile.

It was submitted that, to counter the evidence of Mr. Wilcox the applicants called another expert witness who dealt with two areas, both of which were designed to negate Mr. Wilcox's conclusion. It was submitted that his explanation of the factual situation failed to include any recognition of the erosion that had been established by the evidence. It was submitted that his conclusion that there was no subsidence and that heaving was the cause of the change in elevations of the cottage was contradictory to the observations that had been made by the witnesses. It was submitted that the witness's theory of heaving was inconsistent with the facts of the case and did not provide any explanation of the fact that the piers in the centre of the cottage had a space above them of four inches. It was submitted that Mr. Wilcox's opinion was more in line with the facts and that Mr. Lieszkowszky's is doubtful because of the lack of explanation of the proven evidence and the failure to provide an explanation in respect of these given or established facts. It was pointed out that Mr. Lieszkowszky's investigation failed to provide any consideration of the creation of the depressions in the part of the property that he did not examine.

In summation it was submitted that the obvious damage to the Jeffrey property far outweighs any advantage of the other two aspects of the matter.

At the outset, Mr. Davis pointed out the failure of the Ministry of Natural Resources to take action under section 15 of the Lakes and Rivers Improvement Act in respect of a dam erected without approval and the failure of the Ministry to attempt to resolve differences and conflicts in accordance with that section. Instead the Ministry had allowed the seventeen applicants to submit an application for approval of a structure that had been in place for twenty years excluding the previous structures. He referred to the continuity of the maintenance of constant levels over many years and the subsequent purchase and development of properties based on those levels. He submitted that the matter to be considered is whether, if the continuation of the dam is allowed, there will be an impact on those matters mentioned in section 2 of the Act and he submitted that there would be little impact.

On the issue of public rights, it was submitted on a question of equity and fairness that the applicants constituted seventy-two per cent of the landowners on the lake while the persons requesting the removal of the dam represent only three landowners who have raised a position twenty years after the construction of the dam. On the issue of equity, reference was made to the petition signed in 1960 by the predecessors of the present owners of the Jeffrey property. It was suggested that the obtaining of the 1960 petition was an attempt to proceed through a system of procedural fairness and arrive at a consensus, which consensus was arrived at based on the then views and concerns regarding docks, fishing and navigation and as a result there was an agreement to increase the water levels by six inches. It was suggested that the evidence of K. Jarratt showing consistency of levels since his purchase in 1972 supports the approach. He referred to evidence indicating that there were attempts made to determine if there was opposition and that there were no replies. He emphasized that the petition bore the signatures of the owners of the property in question. It was pointed out that this agreement had been relied on by subsequent purchasers and to change the situation after twenty-six years is inequitable to others who have interests on the lake.

It was suggested that the applicants, in accordance with their evidence, have wide-ranging concerns, that the continuity of the use of the public dock and the concerns over navigation are all reasons to support the continuation of the dam.

With reference to the rights of riparian owners, counsel submitted that this term refers to downstream owners and that there was no evidence of any such damage before the tribunal.

With reference to clause (c) and the preservation of fish, wildlife and natural resources, Mr. Davis pointed out that over a period of twenty to twenty-five years a certain amount of stabilization had occurred and the removal of the dam would again cause a change in respect of the fish and wildlife habitat. He suggested that the evidence left it open for a conclusion, by reason of the difficulty to quantify the elements that the change would be serious as there was evidence of a six per cent reduction in the critical areas in the critical times, a reduction of the area of spawning beds and more risks of exposure of spawning areas at the critical times and possible effect of freezing. In contrast, it was pointed out that there was no evidence of adverse effects if the dam were permitted to remain

With reference to clause (d) and natural amenities, it was submitted that when the dam was created there was an immediate effect of raising the water some ten inches and perhaps even fourteen inches. He pointed out that the evidence showed that erosion occurred immediately and there were complaints at that time in respect of the erosion. Reference was made to Mr. Lieszkowszky's evidence which indicated that erosion was not significant and to the Bryant letter based on the McMullen report. He pointed out that there was no evidence of significant erosion on the property in question and that there was no evidence of erosion of the John Jeffery property or in other areas around the lake. It was submitted that the Jeffreys' activities in clearing vegetation from their frontage may have equally caused erosion, relying on Mr. Lieszkowszky's evidence to this effect

and it was submitted that while it is accepted that erosion occurs constantly, there was no evidence of significant erosion at the subject property and that the degree of erosion did not warrant the change in the circumstances that had existed for twenty to twenty-five years. It was pointed out that steps had been taken to deal with this and that Mr. Lieszkowszky indicated that rocks and vegetation provide the best preventative devices.

With reference to the issue of foundation settlement, it was pointed out that the witness, Mr. Wilcox, professed to be self-taught and based his expertise on his own reading of text books. Reference was made to his evidence where there was no detailed examination of the forces involved such as occurred in the report of Mr. Lieszkowszky, who established a broad experience as well as an academic background and had made tests and calculations of relevant aspects of the concerns such as wave heights, bearing capacities, etc. It was suggested that the theory of frost heave adequately answered the matter of changes in elevation. Mr. Lieszkowszky's evidence respecting the growth of weeds and his indication of the deposition of soil as contrasted with erosion was referred to.

With reference to the theory of subterranean erosion, reference was made to Mr. Lieszkowszky's evidence respecting the necessity for change in gradients for the lateral movement of fines and the fact of raised in the elevation not creating such a gradient.

In conclusion, it was submitted that if the dam were permitted to be allowed to continue, there would be no adverse effects on the several criteria. On the other hand, if approval was refused and the removal of the dam is undertaken, it may be inequitable to owners around the lake. It was not fair and reasonable under all of the circumstances and given the long history of reliance on the present elevations to require a return to the 1960 situation in respect of which there had been concurrence by the owners of the property in question.

In reply Mr. Thomson pointed out with regard to the equities of the matter that., particularly with regard to the failure of the Jefferys to object to the original dam, there was in fact evidence of objection and further, there was evidence of misrepresentation in respect of the obtaining of approval under the Lakes and Rivers Improvement Act and further that notwithstanding the lack of approval the dam was reconstructed at a depth which would be more than double the height mentioned in the 1960 document. In contrast against this background no action was taken until the damage became seriously apparent. It was submitted that the doctrine of laches was not applicable because the applicant had mislead the Jeffreys who accepted their representations that appropriate authority had been obtained. It was submitted that it was not equitable that one person bear the costs of maintaining a break wall for the continuance of an unnatural condition while others who claim a benefit have no cost involvement. The only change in connection with the lake was the construction of the dam and there was no other reason to which the damage suffered by the Jeffrey property could be attributed.

With reference to finding of fact, in addition to matters already mentioned above, it is apparent to the tribunal that the raise in elevation of the waters of the lake by the dam in issue is significantly more than the six inches contemplated by the petition signed in the sixties and an increase of one foot or fourteen inches is fairly apparent from a comparison of photographs although it must be remembered that in lakes which are dependent on rain fall and springs that elevations vary considerably with the nature of the summer season.

With reference to the issue of increased hazards to navigation if the existing water level is not maintained, there is no evidence of serious navigational occurrences prior to the construction of the dam. The lake is relatively small and is fairly regular in outline, not having relatively large or protruding bays. The evidence in respect of the central parts of the lake indicates a significant depth of water and the experience over the years as indicated by the evidence was that aircraft had used the lake prior to the construction of the dam and the tribunal is satisfied that there

is no serious problem of navigation in the event the water is returned to its natural level. Conversely, the tribunal is not satisfied that the raising of the water reduced navigational hazards. The raising of the water to a maximum of fourteen inches probably may have made some areas safer for shallow draught boats but with the advent of larger boats it is apparent that the operators of such boats will either have to rely on their knowledge or their collective activities through the Cottage Owners Association in some marking program. Much of the evidence was related to night navigation and in the areas of rock hazard near the shoreline. The tribunal is not satisfied that the increase in the levels of the water alleviated the existing hazards.

A related matter to navigation is the public dock. There is little dispute as to the facts respecting the dock. In its present condition one side of the dock is not useful for docking purposes and the side that is used would be made more difficult to use if the water were lowered. Parking facilities at the dock are limited at the present time and those persons tying up to the dock are limited in the length of time they can remain tied up at the dock. This is not as a matter of actual regulation but as a matter of self-policing. No alternative locations for a dock were suggested to the tribunal. The only suggestion was that a floating dock be added to the end of the existing dock to make adjustments for changes in elevation of the waters and while this would be costly, it may be less expensive than protective work on the Jeffrey property. While the lowering of the water might not necessarily affect the launching of boats there would be increases in the difficulty in loading passengers and material onto boats.

With reference to wildlife resources and more particularly the fish population of Clinto Lake, it is unfortunate that the Ministry did not provide Mr. Kerr with all of the data that it had in its files. The tribunal is satisfied that Mr. Kerr does not warrant the treatment recommended by Mr. Thomson and as far as the tribunal is concerned Mr. Kerr's evidence is an indication of a serious and interested person particularly as his father owns a very attractive island in the lake. While the tribunal cannot accept Mr. Kerr's theoretical loss of critical habitat in the summer months

creating a division of the lake into two satisfactory basins for lake trout, the tribunal appreciates his view that the absence of data makes it difficult to formulate any conclusion, either lay or professional as to the effect on the wildlife resource. Hence the pragmatic view of the expert of the Ministry that it is more effective to manage wildlife in a natural as contrasted with a man-made environment, particularly when the evidence indicates that the natural conditions in the past provided a lake trout fishery, become more acceptable. Certainly there was no evidence before the tribunal that clearly established that the lowering of the water would in any way detrimentally affect the population of lake trout as it now exists or that the population has been enhanced in quality or numbers by the creation of the higher water level. Further, there is no evidence to suggest that the raising of the water assisted in any way other than a matter of access to nests of one or two species in isolated situations and it would be most unbelievable to expect that there would not be other areas where changing water elevations would provide equal access to nesting areas. The tribunal cannot conclude that there is any serious argument in favour of the granting of approval in respect of this issue.

On the issue of erosion, it is beyond doubt that the road allowance in front of the Jeffrey property has been subjected to erosion as a result of the increased level of the water. The tribunal has dealt previously herein with regard to this matter. The witness for the applicants frankly admitted that there is always erosion and on the occasion of his visit he failed to see any evidence of serious erosion. However, as indicated above, the tribunal is satisfied that there is erosion resulting from the increased wave action at an increased height. Although Mr. Lieszkowszky's had not made any previous consideration of the matter he provided the tribunal with an estimate of twelve feet before such increased wave levels would create an area of stability. Assuming this is correct, the erosion that would result prior to such a stabilization occurring would move the shoreline back to the front of the cottage.

With reference to subterranean erosion, the tribunal accepts the principles outlined by Mr. Lieszkowszky and does not find that the theoretical principles expounded by Mr. Wilcox are applicable in this case. The tribunal is satisfied that the changes of elevation of the cottage

relate to frost heave even though they have not occurred for some time after the construction of the cottage. This passage of time was indicated by Mr. Lieszkowszky as not being unusual. The theory of subsidence is inconsistent as indicated before with the wooden piers under the cottage. The areas of depression beyond the cottage create some doubt but the tribunal accepts Mr. Lieszkowszky's evidence that the theory of subterranean erosion is not applicable.

With reference to legal issues, the question of whether the owners of the Jeffrey property were entitled to be considered riparian owners was put in issue. The Ministry argued that if such owners of summer resort locations sold by the Crown are not riparian owners they are in practical terms entitled to the amenities of a cottage property including the beach and the use of the waters. Such was the purpose of the sale of the cottage properties and to deprive the purchasers or their subsequent assigns of such amenities was, in effect, an interference with riparian rights or the equivalent thereof. Mr. Davis argued that riparian owners should be restricted to downstream owners. In the view of the tribunal, the ownership of a summer cottage property which is separated from a lake by a road allowance does not constitute the owner a riparian owner. However, in this case that principle is of little help to the applicants as the Jeffreys are in a process of becoming the owners of the road allowance and have taken significant steps toward that end. If that approach is successful there will be no doubt but that they should be classed as riparian owners. Even if they are not riparian owners clause (d) of subsection 2 which lists one of the purposes of the Lakes and rivers Improvement Act as,

- (d) the preservation of the natural amenities of such waters and on the shores and banks thereof:

certainly creates an interest of the Jeffreys which is entitled to consideration. Further, as long as the municipalities and the Province do not prohibit purchasers of summer cottage lots from building on the road allowance, there must be some responsibility on the part of the Province to prevent such purchasers from having their investments affected by the construction of dams.

The tribunal is not prepared to recommend that the approval sought by the applicant should be granted for the following reasons:

1. The applicants are not the owners of the land on which the dam has been erected. The Lakes and Rivers Improvement Act places certain responsibilities on the owners of dams and in the absence of ownership of the persons constructing the dam the approaches of the The Lakes and Rivers Improvement Act cannot be carried out from time to time. Accordingly, it is essential that applicants be owners of the site of the dam.

2. The dam was knowingly erected in contravention of the The Lakes and Rivers Improvement Act by persons who were fully aware that approval of the Minister was required before constructing a dam.

3. Assuming the Jeffreys had consented to a raise of six inches in the level of the lake, it is most apparent from the evidence that the present dam is almost twice that height, if not more than twice that height.

4. Balancing the interests of the cottage owners

surrounding the lake and in this regard it may be observed that if the Jeffreys are not entitled to treatment as a riparian owner it would follow that the owners of other cottage properties should be disentitled to express any interest in the beaches, shoreline and water levels, the tribunal is of the opinion that the interests of the other owners do not outweigh the risks and the loss of enjoyment sustained by the owners of the Jeffrey property. While the former may have costs of readjustment of docks and building steps thereto, it is apparent that the north end of the lake which has obviously been subject to erosion over many years and probably had arrived at an area of stability before the water levels were changed has been subjected to a further geomorphological process resulting from human activity rather than natural changes which has resulted in serious expenditures by the Jeffreys as well as the loss of a sandy beach during the summer months. The latter aspect is a highly desirable aspect of a summer cottage property and the loss thereof would seriously affect the value of the property even though the beach may not be owned by the owner of the Jeffrey property from time to time.

In the event approval is given and no other proceedings are taken to remove the dam, the evidence indicates that the owners of the Jeffrey property will be faced with the serious cost of dismantling the fireplace and moving the cottage to a location that is beyond the expected point of equilibrium. In such an event the tribunal would not expect that gabions would be necessary but the cost of moving the cottage, removing the fireplace and reconstructing a replacement fireplace and constructing a suitable foundation would be approximately \$20,000 according to a 1984 estimate. With inflation this estimate would undoubtedly have to be increased. There was no evidence to indicate that any other landowner would be affected to this extent and it is doubtful that if all of the changes required by lowering the water were totalled, and the evidence of such cost was practically non-existent, they would exceed \$20,000.

As indicated above, the tribunal is satisfied with the Ministry's evidence that there is no long-term concern regarding the lake trout population or other wildlife species.

The evidence indicates that there is no perfect elevation of the water in respect of boating. That term is used as there was no evidence of commercial navigation being involved. The evidence is clear that hidden hazards now exist which were patent prior to the raising of the water level. Aircraft used the lake prior to the raising of the water level and there was no evidence of damage at that time or serious evidence that the raising of the water level properly reduces any hazard existing before such action occurred.

With reference to the public dock, the evidence was that the southwesterly side was of limited or no use at the present elevation and that the northeasterly side would only accommodate one boat in respect of parking. At its outer edge the depth of water is forty-eight inches on the northeasterly side and thirty-two inches on the southwesterly side. The dock is approximately twenty-one inches out of the water. If the water dropped ten inches it would be thirty-one inches or two and one half feet out of the water. This condition would only exist in the lower water period and for part of the year the water would be at its original spring level with little difference in the height of the part of the dock above the water.

In addition, the measurements show that the depth of water exceeds ten inches along the northeast side of the dock beyond a location four feet from the shore. It would seem that the water would remain fairly close to the shoreline and there would be little effect on the northeasterly side which provides limited use for parking at this time.

With reference to clause 2(d) of The Lakes and Rivers Improvement Act it may be noted that the amenities to be considered are the "natural amenities" and while existing docks may provide amenity they can hardly be regarded as "natural" and within the meaning of the clause.

Accordingly, the tribunal is of the opinion that the proposed action by the Minister of refusing to grant the permission requested is fair, sound and reasonably necessary for the achievements of the purposes of the The Lakes and Rivers Improvement Act.

DATED this 9th day of April, 1986.

Original signed by

G.H. Ferguson