

**IN THE MATTER OF**

The Lakes and Rivers Improvement Act,

**AND IN THE MATTER OF**

The proposed refusal of the application of Charles W. Fischer for approval of the construction of a dam on a tributary of the Otter Creek known as a creek on West half of Lot 10, Concession 13, of the Township of Carrick, in the County of Bruce.

**REPORT TO THE MINISTER OF NATURAL RESOURCES**

Pursuant to an appointment dated the 15th day of December, 1983 by the Hon. Alan W. Pope, Minister of Natural Resources, under subsection 1(1) of the Lakes and Rivers Improvement Act the undersigned has held an inquiry to determine whether the proposed refusal of the approval of the location of a dam on a tributary of Otter Creek, on the West half of Lot 10 in Concession XIII in the Township of Carrick in the County of Bruce is fair, sound and reasonably necessary for the achievement of the purposes of the Act.

The hearing was held in the Town Hall in Wingham on February 17, 1984. M. Elston appeared for the applicant. C.L. Cottle appeared on behalf of the Ministry of Natural Resources. Pursuant to public notice Marguerite Fischer, the owner of Lot 10 in Concession XIV in the Township of Carrick, which is downstream of the proposed site appeared and was made a party. John Nelson Wilton, the owner of Lot 9 in Concession XIII appeared and was made a party.

The carriage of the hearing was assumed by the applicant. The evidence of the applicant was that he has owned the West half of Lot 10 in Concession XIII since November 22, 1982. He wishes to construct a dam for the purpose of recreation. The proposed size of the dam is one hundred feet in length and would be ten to twelve feet high. He proposes to construct the dam at a location approximately four hundred feet upstream from the intersection of the tributary with Otter Creek. This intersection is downstream from his property.

The stream on the applicant's land is a spring fed tributary of Otter Creek. He stated that it had quite a flow of water at most times, having a constant flow all summer at a depth

of ten to twelve inches and having greater depth in the spring. He described the bed of the tributary as being of shale rock and crossing his farm to the Otter Creek. In his view the Otter Creek flows through a marshy or weeded area and has a flow of water during the entire year. The area through which the Otter Creek flows was grassy and sustained growth of vegetation such as marsh marigolds. He stated that the stream is exposed to sunlight over the greater part of his property. The land adjacent to the tributary is used for agricultural purposes. Mixed grains or cereals are grown on the south side of the stream and on the north side the land is used for the production of hay or pasture. There is a small treed area containing approximately three-quarters of an acre with trees growing on a hilly area which is scrub land and is not used.

Fischer described the stream on his property as being spring fed. It measures one and a half or two miles above his property and springs are located in this area and on his own property as well. In addition, the stream is fed with water from a number of agricultural drains. He was satisfied that the construction of the darn would not interfere with any drainage system, either on his property or any other landowner. He indicated that the flow was somewhat lower in 1983 than it had been in previous years. This comparison reflects his experience derived from farming in the area since 1972 and having resided in the area for twenty-two years.

With reference to the use of the lands for recreational purposes, the applicant expressed the opinion that the stream in its natural condition was unsuitable for the stocking of large fish and that a pond would allow for the provision of fish where none exist at the moment. He intends to stock the headpond with rainbow trout.

It is the proposal of the applicant to construct a darn having an underwater draw off in order that there may be a discharge of cool water from the bottom of the headpond. He felt that such an objective could be achieved by regulating the flow of water out of the pond. He indicated that there were nine or ten

ponds a within a three mile radius of the proposed site flowing into Otter Creek either by way of tile drain or runoff. In his understanding these ponds had top-draws or tile overflows. He also referred to the millpond at Mildmay which he understood to have a topflow.

The applicant indicated that he likes fishing and sometimes fishes in Otter Creek. He has noted the decline in the quality of fishing but admits that there are a significant number of fish in this creek. In his opinion the construction of the head pond would not in any way hurt fishing in the area nor affect the tile drainage systems nor affect the flow of water. He felt that he would be benefitting the stream and would, rather than create any harm, improve the situation.

The applicant indicated that in 1974 he had requested information from the Ministry regarding the construction of a by-pass pond. He found that this was too expensive and dropped the proposal. He is still of the opinion that the construction of a by-pass pond would be considerably expensive as it would require construction in an area that is composed of shale rock and he is not interested in constructing a by-pass pond at this time. He understands that the reason the Ministry is refusing to approve the location of a dam is the possibility that such a dam would cause the waters to be increased in temperature by one degree.

It was brought out on cross-examination by counsel for the Ministry that the recreation uses would be limited to fishing and an occasional picnic in the area. It also appeared that he had not had any serious discussions with Ministry officials as to the advisability of stocking rainbow trout. He was unable to indicate why he thought the construction of a head pond would create a benefit other than it would help to clean up an existing situation which was not identified. He also admitted that the only onstream pond on the creek was the head pond at Mildmay. He admitted that he did not disagree that there was a need for spawning and rearing areas for fish. He indicated that he had had discussions in respect of stream improvement for fishing purposes. He indicated

that he had never seen his property used for fishing and that he had not seen the Ministry officials remove fish from his property although he admitted that he had seen them take fish from Otter Creek. He admitted that the fish that had been taken were brook or speckled trout and included adult and small fish.

Mrs. Fischer brought out that the stream passes through her property on its way to Otter Creek and that her property was used for agricultural purposes. Mr. Wilton discussed the flows from the various municipal drains and inquired whether the fish which would be planted in the head pond would be maintained therein through screens. The applicant admitted that he did not discuss the issue of the migration of fish with Ministry officials.

It was also brought out that the applicant does not reside or have any buildings on the land in question. His residence and farm buildings are located some distance away. The applicant had not obtained any professional advice with regard to his proposal to construct and stock a head pond.

One of the witnesses for the Ministry was David Richard Ablett, the senior resource technician who outlined the procedure for dealing with applications including the obtaining of any objections there may be to the proposal. He indicated that there had been no objection to the construction of the proposed dam from the township officials but some interest was shown from the local conservation authority.

Michael William Malhiot, the district biologist who has been with the Ministry for six years gave evidence as to the investigation of the proposal conducted by him and his staff. He indicated that the matter first came to the attention of the Ministry when it became aware that a dam had been constructed and following discussions the dam was removed. A preliminary and brief investigation of the property in November, 1982 showed that the stream had a potential for fish habitat. A copy of a photograph taken at that time was filed as Exhibit 9. A full analysis of the stream and the Otter Creek in the vicinity of the confluence with the creek was conducted on July 28, 1983. The witness and an assistant visited the site and took water temperatures and sampled

the fish population. It was found that the temperature of the water in the tributary was thirteen degrees and after the mixing of the flows of the tributary with the flows of Otter Creek the temperature of the waters of Otter Creek were reduced from eighteen degrees to seventeen degrees. It was admitted that the difference was not significant but it indicated that the tributary is providing cold water and the cumulative effect of this and other creeks keep the temperature of Otter Creek suitable as a habitat for the fish populations that inhabit the creek.

With reference to fish populations the analysis showed the existence of brown trout weighing two to three pounds in the vicinity of the mouth of the tributary and that the fish tended to congregate at the mouth of the tributary, presumably because of the cooler waters entering the stream at that location. Samples of the fish population in the tributary itself were taken. While spawning brook trout had been observed in the area in the previous fall none were located on the Fischer property. However, on the property upstream where there was cover, fish were found.

With reference to the construction of a dam the witness indicated that with the impoundment of water there would be increased depths of water resulting in a greater surface area exposed to the sun than normally would be exposed resulting in evaporation in critical summer conditions as well as raising of the temperature. The impoundments interfere with the migration of fish upstream. It was pointed out that the maximum temperature for brook trout is twenty degrees Celsius and a temperature of thirteen degrees provides ideal conditions for spawning. The witness also indicated that the habitat in the tributary was rated good in respect of spawning conditions. There was gravel ranging from peasized to larger broken pieces of bedrock and shale measuring ten to twelve inches. **In** addition, there was aquatic vegetation which trapped sediment and provided nutrients. The tributary contained good pools and riffles. The riffles are important as providing an area in which the food can be obtained. The pools provide hiding places with deeper water. The gravel beds provide sites for

spawning. With all these factors the tributary provides a good nursery area for the spawning and rearing of young fish.

A further inspection was made in September of 1983. Exhibit 10 is a table of the age and species composition of trout collected on September 19, 1983. The table shows that two brown trout of the one-year class and three brown trout of the two-year class were identified in Otter Creek at the mouth of the tributary. In the tributary itself, one brown trout under the age of one year and two brown trout in the one-year class were identified below the proposed site of the dam. Also one brook trout in the two-year class was located at this site. Above the proposed dam site one brook trout of the two-year class and one rainbow trout of the three-year class was identified. In the opinion of the witness the existence of these fish indicate that the tributary provides habitat for young brown trout, adult brook trout and rainbow trout. The existence of the rainbow trout also indicates that rainbow trout use the tributary as a migration route and the age of the rainbow trout found indicates that the tributary is important to that species.

The witness also produced photographs which were filed as Exhibit 11 illustrating the nature of the streams. In the witness' opinion the area at which the tributary intersects Otter Creek should not be categorized as a marsh but in effect was merely a typical stream with heavy grasses growing on the banks.

The witness indicated that in his opinion the existence of three brown trout and two brook trout at the confluence indicated a significant influence on the waters of the Otter Creek by the waters of the tributary entering at that location.

The fifth picture in Exhibit 11 illustrates the stream on Marguerite Fischer's property. It shows the existence of gravel beds and watercress, both providing a valuable type of habitat for young fish with a high water quality and quantity.

The witness described the Otter Creek as being a medium sized creek with good water temperatures that is well used for angling. It contains three species, brook, brown and rainbow trout with the principle species being brook and brown trout.

Considerable interest and activity has been expended by anglers, fishing clubs and other groups in improving parts of the creek and approximately twenty-five thousand dollars has been expended in bank stabilization and the provision of devices for hiding and spawning areas. The Ministry is interested in the rehabilitation of this cold water stream. The effect of allowing the proposed dam as contrasted with rehabilitation work would be contrary to Ministry policy and the accumulation of such an impact, although perhaps not significant in itself, would detract from the Ministry program carried on by these public group.

Reference was made to the Wingham District Land Use Guidelines which were filed as Exhibit 12. The guidelines recognize the policy of protecting and rehabilitating cold water streams. On p. 30 it is stated,

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The angler demand across southern Ontario for lake trout and other coldwater fish ultimately will exceed the capacity to produce. That situation currently exists in some areas. To mitigate this situation, coldwater fishery resources have to be protected, and where necessary, rehabilitated.

With reference to the status of cold water streams in Ontario, the witness indicated that such streams are being lost at an alarming rate through land uses such as drainage and industrial uses causing reduced quality of habitat and accordingly, the Ministry is concerned and involved in the protection of such streams.

The witness gave evidence that he discussed stocking with the applicant on the July visit to the property. It was pointed out that stocking is contrary to the Ontario Fishery Regulations unless a permit is obtained and through the permit system the Ministry prohibits the transfer of fish into cold water streams. The policy is to restrict such transplantation into instream dams. If the dam were constructed the policy of the Ministry would be to refuse the permit to transplant rainbow trout into the headpond.

The witness admitted that there were rainbow trout in Otter Creek which use the creek as a spawning area. However, the utilization of the creek by this species is limited by the fact that migrating rainbow trout must pass over the dam at Walkerton

and the policy of the Ministry is to give preferential treatment to brook trout and brown trout species. These two species provide food for rainbow trout and an increased population of rainbow trout would have a predatory effect on the two species that the Ministry feels are the ideal species for this creek.

The witness indicated that in 1971 the Ministry had given approval of the location of a by-pass pond on the subject lands. The construction of such a pond would be highly expensive and of little interest to a landowner.

On being questioned as to the impact of trespass on the fisheries program, the witness expressed the opinion that such is not as serious as the installation of an instream dam.

With reference to habitat rehabilitation, the witness indicated that considerable work could be done to improve the spawning areas and the habitat and that this work could be assisted through the fish clubs.

The witness indicated that no onstream dams had been approved in recent years by the Ministry on cold water streams. With reference to the nature of the control structure in the dam at Mildmay, the witness stated that in the mid-seventies a bottom draw was installed in this dam. This new design has been used in consideration of the repairs of other dams in the district.

In the witness' opinion the building of a dam at the location proposed would be detrimental to fishing on Otter Creek.

On cross-examination the witness indicated that the value of the tributary was more significant from the point of view of young fish rather than mature fish. With reference to rehabilitation work that might be done in the existing bed, it was pointed out that in the pool areas sediment has accumulated and could be removed. There could be changes in the direction of flow to wash out the sediment and provide better habitat. Gravel could be brought in for some of the areas. In the witness' opinion such changes would not be significantly costly but would involve a considerable amount of labour and would enhance the habitat of the existing bed.

There was some discussion regarding the temperatures of

the tributary and Otter Creek and the witness' position was that the temperature of the tributary was lower than the temperature of Otter Creek.

There was discussion of the need for the planting of trees and the provision of shelter. The witness pointed out that some sun is essential to habitat. There is a need for pools approximately two feet in depth to provide nursery areas but such would not be provided in a headpond of a dam.

The witness admitted that the proposed dam would have a minor impact on the Otter Creek.

There was some discussion regarding the precise effect of the temperature changes that result from the merger of the tributary and Otter Creek. The witness indicated that such matters are difficult to assess and that there is some leeway before the maximum temperature of twenty degrees is obtained and the witness emphasized that the major considerations were the precedential implications, the loss of water through evaporation, the increase in temperature and the barrier effect of the instream dam on migration.

J.G.A. Imhoff, the fisheries rehabilitation officer for Southern Ontario, from the Ministry gave evidence. The witness was acknowledged to be an expert in his field. The witness outlined the four characteristics of cold water streams which are suitable for trout and salmon species. The four categories are water quality, food, shelter and space. With regard to temperature the witness indicated that while there may be survival in summer temperatures of twenty-two degrees Celsius, the preferred maximum temperature is twenty degrees. With reference to quantity of water, which must be cold, the witness pointed out that the living space of fish is water and with a lesser quantity there is lesser production. He indicated that the Otter Creek has good water with satisfactory temperatures.

With reference to food, the witness pointed out that the trout feed on small animals and riffle areas are required to provide oxygen and flowing water. The vegetation traps these

animals and the trout feed on the animals. The role of pools and runs is to provide habitat for various ages of trout species. The young require the shallow and the swift, preferably with riffles. The older of the species require broader, deeper areas. Shelter areas are required. These are provided by obstructions to the flows which reduce the strength of the current and provide areas here the fish can hide. Examples of such impediments are rocks, weed beds and logs. A good trout stream has a combination of all of these factors.

Although the witness had not been on site, he considered that the evidence indicated that Otter Creek is a cold water creek. He emphasized the declining number of such creeks in Southern Ontario over the last one hundred years resulting from agricultural and urban use. He indicated that fifty to seventy per cent of such streams have disappeared.

With reference to the importance of brook trout, the witness stated that this species is the only resident stream native species in North America and that the other species, brown and rainbow trout, have been imported and introduced into Southern Ontario waters from Europe and the Pacific rim areas. It is the most sought after game species and receives priority of management by the Ministry in Southern Ontario. He emphasized the protection of the remaining cold water streams which in some areas have been reduced to ten or fifteen per cent of the original number.

The witness pointed out that the habitat for trout species must provide for the three life cycles of the species since each of the trout species requires varying conditions. Brook trout require very specific spring discharged and flows flowing over pea-sized gravel. The brown and rainbow trout require larger gravel with faster water. The brown trout do not spawn in spring discharges. In the second cycle the fry and yearlings require protection from predation. They live on insects in creeks and require a habitat that provides both food and protection. Thirdly, as the species near adulthood they look for larger areas.

The brook trout are most susceptible to changing conditions. The significant or limiting factor is temperature.

Another factor is the depth of water. In spawning, water depths of four to six inches are required. If a change occurs in the spring flow the ideal depths are changed.

From the evidence, the witness indicated that the tributary is primarily a spawning and nursery area and not ideal for adults. However, it is necessary for adults to have habitat as they are essential to the spawning process. The finding of adult species in the sampling process indicated that adults will come into the tributary for such a purpose.

With reference to the brown trout, the witness stated that this species was introduced in 1884 from Scotland. A stocking program existed until the sixties. Currently the only population is based on natural production. This is a salmon species. Although the Ministry gives priority to the brook trout species it also manages the brown and rainbow species and attempts to protect all three species.

The significance of the temperature of thirteen degrees Celsius in July was that the flow of water was generated by a substantial spring discharge and not from surface run off. There are not many such streams in Southern Ontario. The witness indicated that the change of one degree in the waters of the Otter Creek upon mixing of the two streams shows that there is a significant quantity and quality of the water of the tributary.

The importance of the tributary in respect of the brown trout species flows from the utilization of discharge areas by that species as habitat refuges. When the holes in which the species inhabit increase in temperature the species move to cooler areas. Maximized growth is provided in cooler areas and the provision of an area of cooler water is significant to the brown trout species. Accordingly, the larger the area of suitable habitat, the greater is the production of the species.

The witness outlined the effect of the construction of dams. The impoundment of water slows the flow of the water in larger and wider areas with a greater increase in temperature than normally occurs and a greater degree of evaporation. Engineering

studies have shown that evaporation occurs at the rate of one gallon per minute on an area at one half of an acre. **In** a small stream such a rate of reduction has a significant effect on the flow of the stream. Quality is effected in two ways, both by the increase in the temperature and the reduction of the quantity of water.

**In** addition, the construction of dams removes nursery and spawning habitat upstream of the dam. There is also a risk of reduced flows below the dam affecting habitat.

The witness referred to three types of dams, mainly onstream top-draw, onstream bottom-draw and by-pass dams. **In** the onstream dams the water tends to stratify in the headpond creating layers of temperature. The top water warms more than the lower layers with the lower layers having a cooler temperature. Where there are bottom draws, the water with cooler temperatures may be drawn off but although it is cooler than the surface water it is still warmer than the stream itself. On entry the waters of the stream are mixed with the existing warmer waters of the headpond and the temperature is reduced.

The witness dealt with problems resulting from the stocking of rainbow trout. The prime concern is the spread of disease from hatchery stock. Experience has shown this to be a problem and in Great Britain an entire wild trout population was eradicated in two streams through this process. There is an interaction between species of fish. The rainbow are most aggressive and where they are introduced the brown and brook species tend to disappear. The policy of the Ministry is to permit the district offices to prohibit the risks of this result occurring. He understood that the Wingham District was taking steps to apply such a policy. There is a competition between hatchery fish and the wild population. On introduction of hatchery fish there is competition with the natural populations for food and habitat areas. Experience has shown that the introduction of hatchery fish will result in the natural population dying off with

the result that the area ceases to be populated when the hatchery fish are taken.

With reference to the importance of the tributary to Otter Creek the witness stated that small tributary streams are critical to the survival of the main stream. They were compared to capillaries providing sustenance to the main flows. An individual may not be important to the whole. Where the effect is a reduction of the temperature of the main stream there is an effect on the main stream and the policy of the Ministry is to protect the tributaries as part of the entire system. The tributary is a significant part of a long interlinked chain. In managing such matters, a watershed approach is the best approach and in so doing one cannot have regard to the extent of the effect of the specific situation.

The witness indicated that the policy of the Ministry of Natural Resources with regard to cold water streams has developed from the strategic plan for cold water fisheries, and indicated that the most important consideration is the protection and rehabilitation of the cold and warm water streams and in so doing the Ministry treats cold water streams as most precious. The protection of cold water streams has a recreational importance to Ontario as quality streams are essential to an angling program. Such a program constitutes a major resource for the people in general. This importance is not limited to the areas where public access is available but is also important in areas that are not accessible to the public that will provide areas for the production of the species.

With reference to the economic significance of protecting the fisheries of Southern Ontario, the witness indicated that a study in 1980 showed that angling in Ontario was a one billion dollar industry and that a significant portion of resident angling is done in Southern Ontario.

The witness was of the opinion that the proposed dam would hurt the populations of brook and brown trout and should not be permitted under the Lakes and Rivers Improvement Act. On cross-examination, it appearing that the witness had not made an on-site examination but had personal experience in

respect of several portions of Otter Creek and following a discussion of alternative methods of management of the stream and the effect of cattle on such programs, the witness, in examining Exhibit 9, indicated that the ingredient of this portion of the tributary that forms the proposed site of the headpond is too great to maintain a spawning area.

In addition, he admitted that if a bottom-draw darn were used it would be unlikely that there would be a significant change in the temperatures of Otter Creek.

On re-examination the witness indicated that Exhibit 9 did not fully illustrate the stream on the applicant's land and that there was a possibility that there could be nursery areas on other parts of the tributary, indicating that a good stream should provide a variety of habitat.

Mrs. Marguerite Fischer gave evidence that her family owned and operated a cattle and crop farm downstream from the proposed site. Her evidence related to the flow of the stream after the construction of the darn and during the construction period. She gave evidence that the depths of the stream as previously mentioned in the evidence were greater than she had experienced. On her property the stream was as shallow as two inches where the stream widened out to three or four feet and she asked whether there was any information on what the effect of evaporation would do to such depths. She indicated that while their cattle grazed on other lands they are brought to the creek for watering at intervals.

She emphasized the size of the creek and expressed concern that the flow would be reduced.

John Nelson Wilton gave evidence that he was concerned as to the evidence regarding the amount of water and he gave evidence that many of the springs dry up and the flow is reduced downstream. He also has a three to five acre parcel on his property on which the banks are too steep for agricultural use. He is attempting to establish a wildlife environment on this area and is concerned that the species which normally inhabit the area would be prevented from coming upstream by the darn.

The argument on behalf of the applicant was that the

present proposal was an ongoing project which was interrupted in the seventies for lack of funds. He pointed out that both expert witnesses agreed that with the construction of the dam Otter Creek would remain a cold water stream. He indicated that his client was prepared to obtain the engineering advice and technology necessary to install a bottom draw, which in the evidence of Mr. Imhoff would not effect an increase in the temperature of Otter Creek. He pointed out that the evidence indicated that there was still an area of four degrees in temperature in Otter Creek even if the cooling effect of the tributary were removed.

With reference to the concern regarding downstream flow, counsel suggested that the technology related to the control devices in the dam would provide a proper downstream flow. He also raised the possibility of a diversion around the spawning areas shown on the downstream areas. With reference to stocking, counsel submitted that his client appreciated that stocking was subject to ministerial control and if such were not permitted he would not stock. He pointed out that the purpose is not commercial and being private there was no concern from the withholding of consent to stock rainbow trout. The purpose was for personal family use and he submitted that the concerns of the Ministry could be met by studying the possibilities of a bottom draw dam, which matters are matters of approval of plans and specifications rather than matters of approval of location. He submitted that the evidence showed that the proposal would not affect the quality of Otter Creek and the mandate of the Ministry.

On behalf of the Ministry it was argued that the statutory mandate of the Ministry had to be related to the purpose of the Act and reference was made to clauses (c), (d) and (e) of section 2 of the Lakes and Rivers Improvement Act. It was submitted that the administrative function was to balance the public interest as recognized in section 2 and the private interests of landowners. It was submitted that the concern of the Ministry related to a good spawning and nursery area for brook trout, a valuable and disappearing resource. Reference was also made to the effect on the flow downstream and the effect on

existing spawning and nursery areas below the proposed dam. It was submitted that the presence of adult brook trout above the proposed site in September was evidence that the tributary was used by that species for spawning.

Reference was made to Mr. Imhoff's categorization of the brook trout as being an endangered species and the Ministry's view of all three species as being important resources. Reference was made to the general decline in this part of the province in respect of suitable habitat and it was submitted that consideration should be given to the matter in the light of the broad perspective rather than the implications of the specific situation. Reference was made to the evidence that the construction of the dam would destroy potential spawning and nursery ground with the result that there would be a decrease in the populations of the species in Otter Creek. Emphasis was placed on the ability of the tributary to provide a means of increasing the populations of species suitable for angling. With reference to the loss of this specific tributary, it was suggested that the approach should be that consideration should be given on a provincial basis rather than an individual basis and that the general provincial policy should be applicable which involves the preservation of all cold water streams, such a policy being adopted for the Wingham district by the guidelines for that district. Reference was made to the Federal Fisheries Act which makes it an offence for the destruction of habitat. In contrast it was pointed out that the purpose was for recreation. The applicant was not an avid fisherman and his evidence was that his development related to personal use. It was submitted that the public interest would override such a private right.

Reference was made to the position of Mrs. Marguerite Fischer as a riparian owner and it was pointed out that the Lakes and Rivers Improvement Act expressly recognizes the rights of riparian owners and requires consideration to be given to their rights. It was submitted that her property should be entitled to a flow in a natural state. With reference to Mr. Wilton, it was

submitted that the proposal would effect the development of his property by preventing the access of natural species. It was submitted that the interference with the other private interests and the public interest outweigh the particular private interest being requested in this case.

Mrs. Fischer submitted that she was entitled to the same downstream flow. In reply it was submitted that there was nothing in the evidence to show that Otter Creek would be lost as a cold water stream and the prime areas are the reaches below the proposed site and Otter Creek which would not be impaired by the construction of the proposed dam. It was submitted that the Ministry's mandate would be fully carried out by granting the approval requested.

With reference to finding of fact there appears to be little conflict in the evidence. Some issues arise in connection with Exhibit 9, a photograph taken in late November of what is alleged to be the proposed site of the dam. It was inferred that there was a conflict between the evidence of Malhiot and Imhoff. The evidence given by Malhiot was that the photograph indicated at the early stages of the investigation that there was a possibility that the property, when considered as a whole, would provide nursery and spawning areas. Malhiot did not identify that specific site as being a potential site for a spawning area. On the other hand, Imhoff's position was that that particular gradient was too extreme for a spawning area. In view of the fact that the photograph obviously does not illustrate the complete portion of the tributary owned by the applicant and as the subsequent investigation revealed the existence of trout in other parts of the property, the tribunal does not consider there to be any significant conflict of evidence on this particular point. Another issue of fact is the statement by Imhoff in cross-examination that the installation of a bottom drop would unlikely create a significant change in Otter Creek. As the tribunal understands the evidence the position should be interpreted in the following light. The evidence clearly indicates that there is a change in Otter

Creek in the natural conditions. It is not clear whether Imhoff's evidence relates to an adverse effect on Otter Creek or whether it relates to the loss of the existing change that is made in the natural state. The tribunal has considerable doubt as to whether the answer fully considered the implications of changes in temperature and volumes of water and it can only conclude that the comment is an educated guess as to the end result based on the assumption that there would be no significant reduction in the temperature in the water being drawn from the headpond through a bottom draw system.

A third area of concern in respect of the evidence is the effect on the flows of the downstream portion of the tributary after the installation of the dam. The applicant brought no engineering witness to the tribunal and there is no evidence before this tribunal on which it could be determined that a uniform flow of the original quality and quantity could be maintained.

With reference to a recommendation in this matter, it may be said at the outset that the tribunal was not impressed with the planning or the purpose of the applicant. The applicant had not sought any engineering advice with respect to his proposal. He had not considered whether he could construct a dam which would not interfere with riparian rights not only during the course of construction but also during operation.

The applicant failed to impress the tribunal that he was aware of the responsibilities of operating a dam including the changes that are required in varying water conditions ranging from spring runoffs and unusual rainfall situations to dry summer conditions. Further it is not apparent that the applicant had any concept of the cost of construction or maintenance of a dam which would achieve the results that would be expected from the Ministry and from riparian owners.

Lastly, with regard to planning, the applicant had made no effort to determine what species of fish, if any, he could obtain permission to stock in the headpond nor had he considered the possibility of alternatives such as rehabilitation work if he was to establish a better fish population on his land.

With reference to purpose, the purpose of the applicant

was vague and limited. The proposed dam was not required for any industrial purpose such as irrigation for agriculture or any other industry. The location was some distance from his residence and farm buildings and the only use that was indicated in his evidence was that an appropriate setting for picnics would be created. The tribunal has considerable doubt that the applicant has properly weighed the cost and responsibility of operating a dam against any benefits that he might derive.

Having regard to matters in which the Ministry is concerned, section 2 of the Lakes and Rivers Improvement Act sets out the purposes of the Act as follows;

2. The purpose of this Act is to provide for the use of waters of the lakes and rivers of Ontario and to regulate improvements in them, and to provide for,
  - (a) the preservation and equitable exercise of public rights in or over such waters;
  - (b) the protection of the interests of the riparian owners;
  - (c) the use, management and perpetuation of the fish, wildlife and other natural resources dependent on such waters;
  - (d) the preservation of the natural amenities of such waters and on the shores and banks thereof; and
  - (e) ensuring the suitability of the location and nature of improvements in such waters, including their efficient and safe maintenance and operation and, having regard to matters referred to in clauses (a), (b), (c) and (d), their operation in a reasonable manner.

Subsection 14(3) of the Act dealing with the approval of the Minister to the location of a dam reads,

- (3) The Minister may refuse to give his approval under this section to the location of a dam where it appears to him that the construction of a dam at that location would be contrary to any of the purpose of this Act.

It is apparent from the evidence that there is a fairly exceptional situation in the present case. Imhoff stated in his evidence that there were very few streams where a tributary reduces the temperature of the mainstream into which it flows. On the other hand, the expert witness both acknowledged that the significant area of concern was a precedential implication from

granting approval for an onstream dam. The evidence indicates that the policy of the Province has been in cold water stream situations to refuse to grant permission for instream dams and that this policy has been applied in the Wingham District without exception. With regard to the matter of precedent, it is apparent that it would be impossible to grant all applications on the basis that individually they had no effect but collectively there was a significant effect and in the absence of any method of establishing either the priority of those who would be granted permission or the line at which permission should be refused, the tribunal is of the opinion that the only fair method of dealing with such applications is to refuse approval except where there are very serious and extenuating circumstances. There is nothing in the evidence of this case which indicates to this tribunal that there will be any serious losses financially or otherwise to the applicant if the application were refused and the tribunal is not aware of any reason why the general policy of the Province respecting instream dams should not be applicable in this case. Accordingly, it is recommended that approval of the location of the proposed dam be refused.

DATED this 23rd day of July, 1984.

Original signed by G.H. Ferguson

MINING AND LANDS COMMISSIONER