



APPEAL: 84/09 WAT

J U D G E M E N T

LICENCE NUMBERS: C.W.L. 60623
C.W.L. 60624

APPEAL:

The appeal was against the decision of the Deputy Comptroller of Water Rights, dated April 5th, 1984, which authorized the issuance of two water licences on Larulla Creek to Wilfred and Minnie Palfrey, R. R. #2, Sooke, B.C.

The Water Licences were issued by the Deputy Comptroller on May 15th, 1984, as follows:

Conditional Water Licence 60623, which was for the diversion and use of 0.25 acre foot per annum for irrigation purposes on 0.25 acre of Lot A of Section 11, Otter District, Plan 34834.

Conditional Water Licence 60624, which was for the storage of 0.25 acre foot per annum in support of the irrigation licence.

GROUND'S FOR APPEAL:

1. That the applicant for the water licences has not complied with the conditions and recommendations contained in the Dam Inspection Report of G.D. Smith, Dam Inspection Technician, March 3rd, 1983, and letter of G.F. Cox, P. Eng., Dam Safety Engineer, dated March 30th, 1983.
2. That the applicant did not properly apply for a water licence.
3. That the applicant's dam is unsafe.

4. That the Water Management Branch has not enforced the requirements set out in the Dam Safety Engineer's letter of March 30th, 1983.
5. That the Deputy Comptroller of Water Rights failed to deal with many legal and technical difficulties brought to his attention.
6. That the applicant's dam has (a) adversely affected the appellant's property, (b) altered the watertable, causing costly remedial action to be required.
7. That the applicant's dam is an unregistered and illegal work.
8. That the applicant failed to issue the notice required under Section 8 of the Water Act.
9. That the applicant failed to properly apply for the water licences granted.
10. That contrary to the findings of the Dam Inspectors, water does infiltrate and pass through the applicant's dam.
11. That the water licences should not have been issued until after it had been demonstrated that the applicant had clearly met all of the terms and conditions laid down by the Water Management Branch.

HEARING INFORMATION:

The hearing was held at 9:00 a.m. on July 5th, 1984, at the Juan de Fuca Recreational Centre, at Colwood, B. C.

The members of the Board in attendance were:

Mr. Frank Hillier, P. Eng.	-	Chairman
Mr. Geoffrey E. Simmons, P. Eng.	-	Member
Mr. J. O. Moore, B.S.A.	-	Member

Miss Shirley Mitchell - Official Recorder.

REGISTERED APPELLANT, represented as follows:

Mr. Lindon Collard, Sooke, B. C.
Mr. Moe S. Sihota, LL.B. - Legal Counsel

LICENCE APPLICANTS - represented as follows:

Mr. Wilfred Palfrey
Mrs. Minnie Palfrey

The Palfreys were given full party status at the hearing and appeared with the following people:

Mrs. Wendy Morton - Spokesperson
Mr. David Ireland - Witness

WATER MANAGEMENT BRANCH - represented as follows:

Mr. J.E. Farrell, P. Eng. - Deputy Comptroller of Water Rights
Mr. Alan Boom - Dam Inspection Technician,
Water Management Branch,
Nanaimo

Mr. Richard Penner, P. Eng. - Appeal Section, Water Management Branch

Mr. Penner gave no evidence at the hearing.

LIST OF EXHIBITS:

Ex. "A" Appeal Book submitted by the Water Management Branch containing the following documents:

- Site plan and copy of air photo of the Collard and Palfrey properties;
- Letter dated December 20, 1982, advising Mr. Palfrey that his dam is unauthorized and if he intends to continue using the dam, he should apply for a licence and upgrade the structure;
- Application for a licence dated January 6, 1983 by W.J. Palfrey;
- Letter dated February 10, 1983, from Lindon and Betty Collard objecting to application;
- Letter dated April 10, 1983 from Lindon and Betty Collard objecting to application;
- Engineer's report on application;
- Dam Inspection report dated February 16, 1983;
- Dam Inspection report dated March 3, 1983;
- Letter dated March 30, 1983 from Dam Safety Engineer to Mr. W. Palfrey;
- Letter dated June 24, 1983 and plan for remedial work to dam;
- Letter dated June 29, 1983 accepting plans for remedial work;

- Dam Inspection report dated January 19, 1984;
 - Water Act Regulation - Division (2) Acquisition of water licences;
 - Notice of fees and application to be served;
 - Payment of fees;
 - Proof of Posting;
 - Certificate of Indefeasible Title;
 - Water Clearance Sheet;
 - Letter of April 5, 1984 to W. & M. Palfrey advising that licences to be issued;
 - Letter of April 5, 1984 to L. & B. Collard advising that licences to issue to the Palfreys;
 - Letter of May 21, 1984 from Lindon Collard appealing decision of the Deputy Comptroller to grant a licence.
- EX."B" - Pencilled plan of the dam, spillway, ditch, property line and Collard driveway and house, prepared by Eric Schultz, Ministry of Agriculture and Food.
- EX."C" - A series of 22 photographs of the Palfrey property showing the dam, spillway, ditch, and Collard driveway and house, presented by Mr. Collard.
- EX."D" - Water Management Branch - Dam Inspection Report - Before repair work had been done.
- EX."E" - Water Management Branch - Dam Inspection Report - After repair work had been completed.
- EX."F" - A series of 3 photographs of the Palfrey property showing the dam and reservoir, presented by the Palfreys.
- EX."G" - A newspaper clipping entitled "Work Bee at Palfrey's Pond".

SUMMARY OF THE APPELLANT'S PRESENTATION:

Mr. Collard's testimony was as follows:

1. He said that his property was west, and downhill from the Palfrey's property.
2. The dam in question was east, and some 60 to 70 feet from his property line.
3. From the Eric Schultz drawing, he noted that his house was located 6.75 meters lower than the water table of the creek bed.

4. He said that Larulla Creek started somewhere north-east of his property, ran through the Norman Reid property and then onto the Palfrey property. From the Palfrey property, the creek flowed through a culvert under his driveway and then through his property. He said the creek drained a fairly large area.
5. He said the creek bed was restrained after leaving the dam to some 3½ feet in width by cribbing and fill on the banks of the creek. The Palfreys had caused this restriction. He further said that after the stream passed on to his property, it spread out to its natural configuration, which was some 25 to 30 feet in width.
6. He noted that the soil in the Sooke area had a top layer of loose material which could only absorb water up to a certain point. This layer was about six inches in depth and rested on hardpan. During heavy rainfall, this top layer of soil becomes saturated very quickly, which then leads to an unusually heavy runoff into the creeks and streams in the area.
7. He said that in the past, during excessive rainfall, the water had cascaded down this creek bed, and on his property has overflowed the banks, and even cut new creek beds.
8. He told the Board that he had attended the University of New Brunswick School of Engineering in 1962 and 1963. He had also worked three summers for the C.N.R. on surveying and on the pre-engineering of dams, piers and bridges course. Further, he said that he had worked on the Peace River Powerhouse. He had been hired as a grouting expert.
9. Mr. Collard said that Mr. Palfrey's pond cuts the cleaning action of the creek, causing stagnant water to form. He, therefore, believes that this has a deleterious effect on the water which ends up in a delta going into a swamp on his property. He said he had taken a coliform count of the water, but declined to tell the Board whether it was bad or good.
10. He said that he had bought his property in 1979. From the roof of his house, he had observed the Palfrey property and thought at that time that the dam was a waterfall, because during heavy rainfall, the dam

was completely overtopped. He was not aware until the summer of 1981 that the Palfreys had a dam and a pond on their property.

11. In 1981, in a discussion with Mr. Palfrey, he noted that the pond was a dug-out and that Mr. Palfrey had been improving it by cleaning the silt out of the bottom of the pond. From this information, he believed that Mr. Palfrey had penetrated the hardpan layer of earth at the bottom of his pond and allowed water from the pond to infiltrate into the aquifer in the gravel layers below the pond, which, in turn, had caused water to flow onto his property and come up in front of his house. He said this water had caused settling in the foundations of his house and he had a crack in the concrete wall of his basement to prove this fact.
12. Mr. Collard presented photographs to the Board which showed a pit he had dug on his property to reduce excess groundwater from getting to the foundations of his house. He claimed this groundwater came from the Palfrey property.
13. Mr. Collard said that in discussions with Mr. Eric Schultz in the fall of 1981, Mr. Schultz had told him that Mr. Palfrey's dam was an unsafe structure and that he wouldn't trust it for one moment. He said that it consisted of rotten logs and mud, and that if it should let go, it would create a deluge which would carry everything before it to the bottom lands 90 feet below. On this basis, he contacted the Water Management Branch, Ministry of Environment, with a request to have this dangerous and unlicensed dam removed.
14. Mr. Collard said that Mr. Boom, Water Management Branch, made an inspection of the dam in December, 1982. At that time, Mr. Boom asked Mr. Collard why he had constructed his house below the dam and suggested that he build a dyke to protect the house from possible damage should the dam fail. Mr. Collard subsequently built the dyke but believes it would be inadequate in the case of a real failure of the dam.
15. On December 20, 1982, Mr. P.G. Odymsky, engineer for the Victoria Water District, wrote to Mr. Palfrey, telling him the following:

- a) Your log and earth-fill dam is unsafe and needs upgrading.
 - b) The face of your dam is vertical, the base of the dam is not wide enough, the spillway is in the centre of the dam which is normally not allowed, and the spillway is too shallow to pass winter flows without the dam being overtopped.
 - c) Should you not apply for a water licence for this dam within one month, the dam must be removed.
16. In regard to the size of the spillway, Mr. Collard stated that the Ministry of Highways required culverts of 3.2 meters cross-section on Larulla Creek. He noted that the spillway on the dam was only 0.5 meters cross-section.
17. Mr. & Mrs. Palfrey made application for their water licences on January 06th, 1983. Mr. Collard heard about the application by chance, and after studying the application, wrote to the Comptroller of Water Rights with several complaints about the application, the main points being as follows:
- a) The application was improperly posted.
 - b) Mr. Collard was not informed of the application which was a violation of his riparian rights.
 - c) The dam location was not properly described.
 - d) The construction of the dam was not properly described, particularly in regards to its interior construction.
 - e) The structure encroached on his land.
 - f) The sketch of the dam, which formed part of the application documents, was inaccurate.

Mr. Collard received no answer from the Deputy Comptroller of Water Rights concerning his complaints.

18. On February 10th, 1983, Mr. Boom, Dam Inspection Technician,

made a further inspection of the dam and wrote a report, dated February 16, 1983, on his findings, and recommendations. Mr. Collard was critical of this report in that he believed the findings were substantially incorrect. Further, he found that the recommendations were not particularly good and had not been carried out to this date.

19. On March 3rd, 1983, Mr. G.F. Cox, Dam Safety Engineer, and Mr. G.D. Smith, Dam Inspection Technician, inspected the dam, and in their report, and in Mr. Cox's letter of March 30th, 1983, made the following comments and recommendations:
 - a) Providing a "plans approval" clause is inserted in the licence, I can see no dam safety issue which would delay the issuing of a licence.
 - b) Mr. Palfrey's dam is found to be in reasonable condition although certain works are required to rehabilitate the structure.
 - c) Mr. Palfrey will submit plans detailing how and when he will rehabilitate the dam located on his property. The plans shall cover, at least, the excavation of an emergency spillway, the removal of the logs on the downstream face of the dam and the replacement with either treated logs, an earthfill weighting section or a rockfill weighting section. The plans will be submitted on or before April 30, 1983, to Mr. A. Boom at the address shown above.
 - d) The submitted plans will be reviewed, made sufficient, if necessary, and approved. Work shall be carried out during the summer of 1983 and shall start as soon as practical after no flow condition has been achieved in the creek.
20. Mr. Collard was critical of the events which had taken place subsequent to the Cox letter and report, in that Mr. Palfrey had not submitted plans for his remedial action, had not removed the organic material from the dam and had not provided a proper emergency spillway in accordance with Mr. Cox's instructions.
21. Mr. Collard then provided additional photographs showing the dam while remedial action was taking place,

and after it had been completed. He was concerned because he felt the placement of the rock fill behind the dam had not been done correctly in that the rock had been placed on top of loose dirt and was not contoured to the proper slope.

22. Additional comments which Mr. Collard made during his summation of his evidence were as follows:
- a) With the dam in place, the water-table levels were sufficiently high in the area, particularly on the Palfrey property, as to prevent septic tank disposal fields from operating properly. He claimed disposal field sewage or effluent flowed down ditches from the Palfrey property and on to his property.
 - b) He said there was seepage and infiltration through the face or toe of the dam because when water stopped flowing over the spillway, there was still a 2-inch flow of water through the culvert under his road.
 - c) He said that no one in the Water Management Branch would say whether Mr. Palfrey had properly completed the work required by the Branch to make the dam safe, or whether, in fact, the dam was now safe or not.

COMMENTS MADE DURING THE CROSS-EXAMINATION OF THE APPELLANT:

- 1. Mr. Collard said that his course at the University of New Brunswick was a four-year course in Chemical Engineering. He had completed two years, which were of a broad engineering nature.
- 2. Mr. Collard had no hard evidence about the age of the dam.
- 3. Mr. Collard had no evidence that overtopping of the dam had caused damage to the dam in the past.
- 4. Mr. Collard said there was no relation between the seepage through the dam and the water problem on his property. The creek bed below the dam was perfectly capable of carrying away large amounts of water. The water problem on his property was due

to infiltration of the aquifer below the impermeable clay layer to the foundation of his house.

5. Mr. Collard said that he had not had a close up inspection of the Palfrey dam. His inspection had been from the confines of his own property,
6. Mr. Collard said that he had seen a backhoe at work on the Palfrey property, but was not sure whether it had been in connection with the pond or not.
7. Mr. Collard indicated that the creek flow to his property at certain times of the year was cut off because of the dam. He also noted, however, that he had no use for the water. In addition, it was further noted that Mr. Collard had no water licence which would entitle him to the use of the water.
8. Mr. Collard did not deny under cross-examination that the only incursion into the gravel layer containing the aquifer that he was sure of was that which took place on his own property, and which had been made by himself or his own contractor.
9. Mr. Collard admitted under cross-examination that lenses of gravel could exist within the soil, rather than, or in addition to continuous gravel layers.

SUMMARY OF THE WATER MANAGEMENT BRANCH PRESENTATION:

1. Mr. Farrell noted that Mr. Boom had written to Wilfred Palfrey on June 29th, 1983, stating the following:

"Thank you for your letter of June 24th, 1983, and the attached sketch. These have been accepted as plans for the work to be done on your dam this summer. This Branch has no objection to the work being done in this manner.

"Would you please contact this office at 758-3951 or the above address when the work is completed".

2. Mr. Farrell said that the two main points of concern as far as his Branch is concerned are as follows:
 - a) The safety of the dam;
 - b) The legality of the Application for the Water Licence.
3. He further stated that in connection with the safety of the dam, the following appellant's concerns are the important ones:
 - a) Unknown foundation conditions;
 - b) Unknown quality of the embankment material;
 - c) Seepage through the dam;
 - d) The centre spillway;
 - e) The rotten logs in the dam face.
4. Mr. Farrell then went on to state that as far as the unknown foundation conditions and unknown quality of the embankment material are concerned, Mr. Boom investigated this matter and has satisfied himself that reasonable conditions are in existence, and that the conditions are not hazardous.
5. Mr. Farrell also stated that Mr. Boom had inspected the dam on four occasions and at no time did he find seepage through the face.
6. He further said that the centre spillway and inadequate freeboard have been remedied by the completed works, (i.e. the emergency spillway). This was a directive of the Water Management Branch.
7. Mr. Boom, in his evidence, stated that if a rockfill was placed on the dam face, this was the preferential treatment and under these conditions, the logs, which were still doing the job, could be left in place. In actual fact, the rockfill had been placed on the face of the dam.
8. Mr. Farrell stated that, initially, certain derogatory statements had been made by his staff regarding the safety of the dam. However, as more and better information was obtained, these engineering appraisals were revised. The investigations took place over

a two-year period with some of the Branch's top staff being involved. For instance, Mr. Cox is the Provincial Dam Inspection Engineer, and has experience on dams smaller than Mr. Palfrey's right up to the Mica and Revelstoke power generating dams. Mr. Farrell stated that, notwithstanding the above statements, the bottom line at this point in time as the dam now exists after the remedial action has now been completed, is that his experienced staff in dam inspections are satisfied that the dam is not a hazard to Mr. Collard and is not a safety problem.

9. Mr. Farrell also stated that under heavy upstream flows in the creek during storm conditions, or in the case of a stream blockage letting go, the dam constituted more of a safety measure, rather than placing the Collard property in jeopardy, because of its damping effect.
10. Mr. Farrell stated that Mr. Odynsky's letter of December 20, 1982, said the dam was unsafe and needed upgrading. He gave Mr. Palfrey the option of applying for a water licence within one month or removing the dam. The application for a water licence carried with it the requirement to upgrade the dam. Mr. Palfrey applied for his water licence within the required length of time.
11. Mr. Farrell took the position that Mr. Palfrey had correctly followed the regulations for filing an application for a water licence under the Water Act, except for minor discrepancies, which are common in 80 to 90 percent of the 2400 to 2500 applications the Branch receives in a year. He said that the Branch does not reject applications from the public because of minor infractions of the licence application procedures when these infractions do not affect the rights of others.
12. Mr. Farrell stated that he was in possession of a legal document, provided by the Palfreys, stating where they had posted notice of their water licence application. He was satisfied that the posting complied with the requirements of the Act. He noted that Mr. Collard had found out about the application and, therefore, had not lost any of his rights, including the right to appeal.
13. He said that Mr. Collard had not been served with a notice of the application. Mr. Collard had said that

this was required under the terms of his riparian rights. Mr. Farrell noted that riparian water rights were revoked in British Columbia with the proclamation of the Water Act. These rights were now within the jurisdiction of the Province.

14. Mr. Boom said that he had been in his job for some 10 years and during that period of time, had inspected about 150 dams; to date, of those he had ruled to be safe, none had failed.

COMMENTS MADE DURING THE CROSS-EXAMINATION OF THE WATER MANAGEMENT BRANCH:

1. Mr. Boom stated that the criteria for emergency spillways for the Branch were that they must be able to handle the largest expected flood in a 200-year period, or the largest anticipated flow possible. He said that the emergency spillway at the Palfreys' dam would handle the largest anticipated flow. He noted that there had been very heavy rainfalls in 1983, but that the emergency spillway had not been required.
2. Mr. Boom also noted that the Ministry of Highways do not carry out studies for individual culvert sizing. They use arbitrary culvert sizes and if the culvert washes out, they instal a bigger one the next time.
3. Mr. Farrell noted that Mr. P. G. Odynsky had not visited the damsite at the time he wrote his letter of December 20th, 1982.
4. He also noted that other licenced dams existed within the Province which have centre spillways. If they are old dams and no problems exist because of the centre spillway, they are accepted for licencing.
5. He further noted that on the basis of revised information, Mr. P.G. Odynsky, on April 14th, 1983, signed the engineer's report approving the Palfreys' application for the water licence.
6. He stated that the normal practice of the Water Management Branch was not to single out a person such as Mr. Collard for notification of a licence application.

7. On January 6th, 1983, the Palfreys posted notice of their water licence application at the following places:
 - a) point of entry of the creek on the subject property;
 - b) at the north-east corner of Lot "A" Plan 34834, Section 11, Otter District;
 - c) at the storage dam site, 10 feet inside the north-east corner;
8. Mr. Farrell said that the estimate of the Water Management Branch on the age of the dam is 30 to 40 years.
9. He also said that the Water Management Branch accepts old dams for registration, provided they comply with the Branch's safety regulations, without going through the plans procedures of new dams.
10. He further said that the Water Management Branch has no evidence of any damage being done to this dam over the years from yearly flood conditions, even during the last ten years before the dam was rejuvenated.
11. Mr. Boom stated positively that this dam was safe and constituted no hazard. The Board noted that in his appraisal of the safety of some 150 dams which had taken place during the course of his work with the Branch, he has been right 100 percent of the time.
12. Mr. Farrell said that the emergency spillway is 2 to 3 inches higher than the existing spillway.

SUMMARY OF THE LICENCE APPLICANT'S PRESENTATION:

1. Mr. Ireland said that he had done the contract work for the dam remedial work. He managed the job with volunteer help from the community.
2. He produced three photographs showing the placement of rock on the downstream side of the dam. He said that he had placed the rockfill on both sides of the dam as follows:

- a) Front Face: approximately two feet wide at the top and six feet wide at the bottom over about a 44-foot length.
 - b) Back Face: approximately four feet at the top and six feet at the bottom.
 - c) The rock was hand placed and dug into the ground at the bottom of the dam, with the biggest rocks at the bottom. Mr. Ireland said that he had taken out any logs which were no good before placing the rock.
- 3. Mr. Ireland said that the original dam was constructed for the Caines Logging Company in the late 1930's or early 1940's. The area involved was a log dump, and his own house had been a shed used by the Company. The pond behind the dam provided water in case of fire.
 - 4. He also said that the original dam had been constructed using 3-foot diameter cedar logs at least 30 feet long. He said that during the current renovation, 11-12 yd. truck loads of rock had been delivered to the site for the purpose of reinforcing the dam. He estimated that over 100 yards of rock had been used.
 - 5. Mr. Ireland said that he had some experience in building dams as he had built all of the sea walls in Sooke and one dam for Fisheries. He said that the Palfreys renovated dam was now perfect and very solid, including the existing spillway.
 - 6. Mr. Ireland further said that to his knowledge, water had never gone over the top of the existing dam.
 - 7. Mr. Ireland said that the only digging he had ever done on the Palfrey property with his backhoe had been to dig the Palfreys a well. He was aware of no other machine digging on the property.
 - 8. Both Wendy Morton and Dennis Ireland said that Mr. Palfrey, whose age was over 80, had only cleaned out silt from the bottom of the pond with a hand shovel and bucket. The silt had been placed on his garden. The hardpan had not been breached under the pond.

COMMENTS MADE DURING THE CROSS-EXAMINATION OF THE
LICENCE APPLICANT'S REPRESENTATIVES:

1. Mr. Ireland lives 500 feet up the hill from the Palfreys. He was on the Palfrey property with his backhoe in 1983 to dig the well. He has not excavated in the pond area behind the dam.
2. Mr. Ireland, in repairing the dam, said that he had first dug a trench across the face of the dam down to hardpan or blasted rock. The large rocks, some of which were 3 feet in diameter, were buried up to 1½ feet deep into this material. He said that he had not disturbed the old, large cribbing logs, which were wet and in good shape. He followed the same procedure on both sides of the dam.

FIELD INSPECTION:

Following the hearing of evidence at the Juan de Fuca Recreation Centre, the Board inspected the Palfrey dam, and the Collard property and basement of his residence. The inspection was made in the presence of all of the parties to the appeal, including Mr. Collard, Mr. & Mrs. Palfrey, and representatives of the Water Management Branch.

DECISION:

The Environmental Appeal Board has considered all of the evidence submitted to it at this appeal hearing and has come to the following conclusions:

1. The Palfrey application for the two water licences has been handled properly by both the Palfreys and the Water Management Branch personnel, and there appears to have been no infraction of any consequence beyond that which is normal when dealing with an uninformed public.
2. The Palfrey dam, as it now stands after the remedial action, and with some minor alterations to the emergency spillway as directed by the Board, is entirely safe and constitutes no hazard to the Collard property.

3. The Palfreys have not done anything to the bottom of the pond behind their dam, or taken any action during the remedial program to the dam which would cause a change to groundwater elevations on the Collard property. If there has been a change in groundwater elevations to the Collard property, one possible reason for this change may be that Mr. Collard himself has cut through the hardpan layer into the aquifer during the construction of his house. At any rate, when the Board examined the crack in Mr. Collard's basement, the Board noted that the crack was very small and appeared to be a temperature or expansion crack rather than a settlement crack.

On the basis of the foregoing conclusions, the Board, therefore, now dismisses the appeal.

The Board, however, directs the Deputy Comptroller of Water Rights to ensure that the Palfreys carry out the following modifications to the emergency spillway:

- a) The stonework rising above the level of the entrance to the spillway is to be removed down to a level below the entrance elevation. A new sill is to be constructed such that its profile conforms and is coincident with the cross-sectional profile of the grassed emergency spillway.
- b) The downstream section of the spillway is to be excavated to a depth and cross-section equal to that in the section adjacent to the spillway sill. The new excavation is to have an alignment which will ensure that any discharge through the spillway would be returned to the creek bed within the limits of Lot "A".



F. A. Hillier, P. Eng.,
Chairman
Environmental Appeal Board

Victoria, B. C.
July 17th, 1984