



Province of
British Columbia

Ministry of
Environment
and Parks

ENVIRONMENTAL APPEAL BOARD
Victoria
British Columbia
V8V 1X5

APPEAL NO. 87/16 WAT

JUDGEMENT

In the appeal of the City of Cranbrook under the Environment Management Act against the decision of the Deputy Comptroller of Water Rights, dated January 30th, 1987, to issue Conditional Water Licence No. 65169 to Ralph and Gina Trozzo authorizing the diversion of 6.25 acre-feet of water from Joseph Creek for the purpose of irrigation.

APPELLANT:

THE CORPORATION OF THE CITY OF CRANBROOK
40 - 10th Avenue S
Cranbrook, B. C.
VIC 2H8

HEARING DETAILS:

The hearing was held on August 26th, 1987, in Cranbrook, B.C., before a Panel of the Environmental Appeal Board. Board members in attendance were:

Mr. G. E. Simmons, P. Eng. - Chairman
Mr. Ian Hayward, P. Eng. - Member
Mr. G.M. Reed - Member

Miss Shirley Mitchell acted as recorder of the proceedings.

APPELLANT:

The City of Cranbrook,
represented by Mr. Allan Rella, Counsel

Mr. F.G. Crashley, P. Eng., City Engineer,
gave evidence.

Mr. C.D. Sellars, P. Eng., gave evidence.

LICENCE HOLDER:

Ralph and Gina Trozzo,
represented by Miss Milly Trozzo.

Mr. Ralph Trozzo, having been granted full party status,
gave evidence.

RESPONDENT:

Deputy Comptroller of Water Rights

Mr. J.E. Farrell, P. Eng., Deputy Comptroller of
Water Rights, gave evidence.

Mr. R. J. Penner, P. Eng., gave evidence.

EXHIBITS:

- EX. "A" Appeal Book - City of Cranbrook
- EX. "B" Curriculum Vitae - C. David Sellars
- EX. "C" Appeal Book - Deputy Comptroller of Water Rights
- EX. "D" July-August Rainfall figures - Cranbrook Airport

FACTS:

A water licence was issued to Ralph and Gina Trozzo on January 30, 1987, to divert 6.25 acre-feet of water from Joseph Creek over the period April 1st to September 30th, annually, for irrigation purposes. The City of Cranbrook appealed the issuance of the licence, contending that the additional extraction of water from Joseph Creek would impact on the release it makes from its reservoir to ensure flows through the City during the dry summer periods. Further, it was argued that the decision to allow the licence was in part based upon a questionable source of so-called unrecorded inflows to Joseph Creek from a small tributary which is intermittent and normally flows only in the Spring.

The City of Cranbrook holds a number of water licences on Joseph Creek and this supply is augmented by a licence to divert water through a pipeline from Gold Creek. All these licences have a priority date ranging from 1872 to 1909. A reservoir on Joseph Creek enables Cranbrook to store water annually in order to provide for the needs of the City in the low-flow periods of the year.

There are six other water licences on Joseph Creek between the City's reservoir and the town's southern boundary. These licences are for irrigation purposes during the summer months and their total is extremely small compared with the amount extracted by the City.

Ralph and Gina Trozzo own a five-acre parcel of land situated on Joseph Creek. The point of diversion for their licence lies between the reservoir and the City limits and is downstream from the lowest private licensee.

Counsel for the City noted that the argument was essentially a technical dispute since it was agreed that the volume of water which Mr. Trozzo might divert was insignificant relative to the City's usage. There was concern that other landowners might be successful in obtaining similar licences on which the City understood was considered to be a fully recorded stream. In addition, there was no dispute as to the data available but only to the interpretation and the conclusions.

Mr. Crashley in giving evidence advised that he had been City Engineer for some eleven years. He described the system under the City's licences, noting that the main reservoir now controlling flows was built in 1974 to replace a much smaller structure. The reservoir spills because of surplus flows for a short period most springs. During the summer, the natural supplies from both Gold Creek and Joseph Creek are supplemented from water stored in the reservoir, and this process continues throughout the winter in varying degrees.

Because there are water licences downstream from the reservoir, with priority dates preceding those of the City, an arrangement had been made through the Regional Water Manager to make additional releases from the reservoir during dry summer periods to meet these downstream irrigation requirements.

Mr. Crashley described the procedure and indicated that the quantities released were usually larger than needed by the licensees. The additional amounts were to provide flows in the very dry period to ensure that there was water in the stream bed for the quiet enjoyment of riverside landowners within the City, and for a resident population of fish. Further, some additional amount was often required to offset the quantities lost to the gravels when the stream bed was very dry.

In order to ensure supply throughout the year, the City has instituted water restrictions during peak summer demand periods when water use has topped 9,000,000 gallons per day. In the very dry summer of 1977, the total release from the reservoir for the downstream irrigation licences of some 600,000 gallons per day did not even reach the old reservoir, according to Mr. Crashley. He believes that the volume was being totally extracted by both licensed and unlicensed water users immediately downstream from the reservoir that year.

Questioned about the contribution from the small tributary known as Andrea Creek which joins Joseph Creek just upstream from the Trozzo property, Mr. Crashley indicated that while some flows were evident in its lower reaches at certain times of the year, he had seen only a dry drainage pattern, although there is one water licence on the creek. Because he has not observed any stream flows in Andrea Creek in dry weather, Mr. Crashley felt that Mr. Trozzo's only source of irrigation water was the releases made from the reservoir.

Counsel for the City introduced Mr. C.D. Sellars, P. Eng., and the Panel accepted Mr. Sellars as an expert witness.

Mr. Sellars, having reviewed the available material and paid a visit to the Andrea Creek catchment area, expressed the opinion that although data used in argument for the licence issuance was acceptable, the interpretation was not necessarily so. Releases from the reservoir were required to ensure stream flows for irrigation, fish and riparian enjoyment during dry summer periods, plus an additional quantity to accommodate stream bed losses. He noted that of the eight years of flow records for Joseph Creek at a point downstream from the City, the first four years predate the construction of the big reservoir. He argued that the recorded flows at the downstream point including the low figures for 1977 were, in fact, reflecting the releases from the reservoir.

With respect to the capability of the Andrea Creek catchment area to contribute to Joseph Creek flows, Mr. Sellars referred to his review of rainfall records for the Cranbrook Airport covering a period of 49 years. He noted that for the period of record, July plus August, rainfall was less than for the same months in 1977 in 37 of the 45 years. He concluded that for 75% of those years, there would likely be insufficient contribution from the lower drainage basin of Joseph Creek, which includes that of Andrea Creek to satisfy downstream demand. Releases from the reservoir would, therefore, be necessary under such conditions.

He concurred with the information set out in the Deputy Comptroller's letter of January 30th, 1987, to Mr. Trozzo that Joseph Creek at the reservoir was over-recorded, but could not agree with a subsequent statement in the same letter that there was sufficient water for the licences downstream from the City's northern boundary without release from the reservoir. From his review of rainfall data, other flow records, and his visit to the Andrea Creek area, Mr. Sellars was of the opinion

that the latter creek made no contribution to Joseph Creek in dry summer months and that Mr. Trozzo would, in fact, be drawing upon the releases from the reservoir. He indicated that more evaluation is necessary before a decision could be made on the availability of supply for the licence in question.

Under cross-examination, Mr. Crashley advised that the pipeline from Gold Creek can only carry 5,000,000 of the 8,000,000 gallons per day of the Gold Creek diversion licence; thus, summer shortage leading, for example, to water use restrictions is largely due to the limited capacity of the Gold Creek diversion pipe rather than lack of water in the supplying streams. He did note, however, that Gold Creek summer flows on rare occasions had been extremely low.

Mr. Sellars responded to questioning by agreeing that the drainage area downstream from the reservoir can contribute run-off during wetter summers than that of 1977. Such run-off, because it is unassigned, is considered to be "unrecorded" water. He further agreed that licences with earlier priority than the City seem to be guaranteed their licensed amount as long as the City made releases from its reservoir. If there was no dam, those licences could experience some water shortages in dry years.

Mr. Trozzo, in a brief presentation, advised that he needs water for only seven days in each of the months of May, June and July. Joseph Creek crosses his property and erosion is taking parts of his land away. Since 1978, he has never seen the creek dry on his property. He has a few cows and uses sprinklers to irrigate forage crops on his five-acre property.

Mr. Farrell, in presenting evidence, contended that there is unrecorded water in Joseph Creek, as discussed by Mr. Penner, and that Mr. Trozzo is entitled to any such flow for any time of the year. The issuance of the licence would, thus, in no way affect Cranbrook's licences or any other licence upstream or downstream from Mr. Trozzo's property.

There have been many licences on Joseph Creek over the years. By 1959, the stream carried some 36 irrigation licences and three waterworks licences, the latter amounting to 9,048,000 gallons per day. Many of the irrigation licences were for properties within the City limits which were subsequently subdivided, and the irrigation needs disappeared. In

the following years, all these licences were either abandoned or cancelled. A major portion of their quantity total was subsequently converted into four waterworks licences and transferred to the City of Cranbrook. In consequence, the City gained a further 610,200 gallons per day for waterworks purposes at the main reservoir. The cancellations and abandonments were some 50% of the pre-1960 numbers, and the quantity of water under licence was reduced by 40%. Thus, the situation with respect to water licences on Joseph Creek would appear to have changed significantly in recent years.

Mr. Penner pointed out that mid-summer flows in Joseph Creek downstream from the City are usually substantially greater than the total allowable licensed diversion between the City's northern boundary and the mouth of the Joseph Creek. Only in 1977 were the flows during July and August less than the foregoing total.

Mr. Farrell noted that 1977 was a very dry year and that many streams throughout the Province had substantially reduced flows. Mr. Penner had compared flows at the downstream gauging station 8NG074 with rainfall data at Cranbrook Airport, and indicated from his plotted data that there did not appear to be any relationship. He concluded that one could not assume that for other years of yet lower rainfall, there would necessarily be lower flows downstream from the City.

It was restated by Mr. Penner that although July flows, the latest month Mr. Trozzo wishes to divert water, are usually much greater than in August or September, the records show that such is not always the case. However, because Mr. Trozzo's licence post-dates those of the City's, and his point of diversion is downstream from those of the City's, there should be no affect on the latter's supply because of the Province's water rearrangement policy, under which water licences of earlier date have precedence.

With reference to the Andrea Creek drainage, Mr. Farrell noted there are actually two small creeks involved, having a drainage area of 4 1/2 square miles. He agreed that in some years, these creeks would not supply surface flows in summer months, but when they did, such flows were considered to be unrecorded water. Maximum use of the water resource in the area could, in time, warrant flow measurements at a number of points and regulation of the diversions under licence. Since Mr. Trozzo wishes to use water during May, June and July only,

then regulation by the appropriate authority is conceivable. Future licences for water uses such as aesthetic amenities, fish populations, or possibly other needs, can be protected by regulatory procedures, taking into account priority of earlier licences.

Under cross-examination, Mr. Penner agreed that the City was releasing water from its reservoir but noted that when the stream was dry through the City, even with those releases, it was not possible to say for certain where the flows recorded at the downstream station were originating. One possible source would be Andrea Creek catchment area. Inflows to any stream are either surface or sub-surface flows. During dry periods, Andrea Creek can be making some sub-surface contribution.

SUMMATION:

This Panel accepts the argument that there can be, at any time, unrecorded water entering Joseph Creek from the Andrea Creek catchment area. The question which may well be difficult to answer lies with the ability to establish the quantity, particularly during the dry summer months. Technically, the argument appears to be valid. However, the dry weather contribution to Joseph Creek is going to be relatively small and would be by way of sub-surface inflow, a condition contributing to the flows of all streams.

Mr. Trozzo's licensed quantity is 6.25 acre feet, which he may extract from the period April 1st to September 30th. Although Mr. Trozzo may only wish to divert during the months of May, June and July, and then only for a week in each month, a subsequent landowner may use the full licensed amount over the prescribed period. The allocation in the license is very small in comparison with the diversions being carried out by Cranbrook under license. At any time, some part or all of the amount being extracted by Mr. Trozzo is being supplied from the Andrea Creek drainage area as well as from some parts of the Joseph Creek drainage downstream from the nearest licensed point of diversion.

The magnitude of any rainfall in the Andrea Creek area will be a factor in the degree of surface runoff to Joseph Creek. When surface flows do occur, such volumes would be available to Mr. Trozzo up to the value of his licence. There may or may not be a clear correlation between rainfall at the

Cranbrook Airport and runoff from the lower levels of Joseph Creek and its tributaries, and certainly no evidence was presented to confirm or deny such a relationship. However, the disposition of rainfall over preceding time cannot be completely discounted as a contributing factor in sub-surface runoff to Joseph Creek.

From evidence presented, it would appear that Cranbrook has an adequate water supply both for the present and for some considerable time to come. Under the Province's water licensing policies, the City's water resources are well protected through the priority of the licences it now holds. Therefore, Cranbrook's concern with the possibility of subsequent licensing downstream from the main reservoir on Joseph Creek appears to be unfounded.

However, since the City does release flows from the reservoir by arrangement to accommodate those few downstream licences of prior date, it will always feel that any later priority licences, such as Mr. Trozzo's and perhaps others, would take advantage of these released flows when summer months are very dry. If there should be future awards to other than the City for diversions from Joseph Creek below the main dam, regulation to ensure proper allocation would be necessary. In terms of the licence in question, such action would not appear to be required.

As set out in the grounds for appeal, the Panel noted that Cranbrook makes releases from its reservoir for the benefit of riparian landowners and to assist local fish stocks during low inflow periods in the summer. Since the City is only licensed to divert and use water for waterworks and irrigation purposes, it would appear that licences might be sought for these other uses of the flows of Joseph Creek and Gold Creek. In that way, the City would be seeking to protect its position with respect to such water usage.

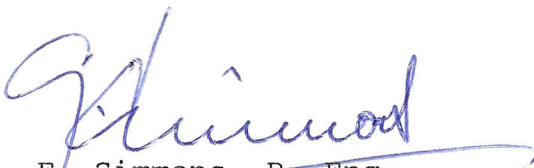
Reference was made to daily releases by the City and flow records at the downstream gauging station 8NG074. It was not clear from evidence presented whether the extra daily releases were in the same amount of 600,000 gallons per each day of any one month. Nor was it clear that such an amount was released each day in July and August, 1977. Thus, since the flow data presented were mean monthly flows, it is difficult to be sure of any clear relationship. From evidence, it was suggested

that in 1977, prior licencees extracted all the released flows because there was no water in the stream bed within the City. There was no evidence to indicate that in that summer, the downstream prior licencee, the Department of Indian Affairs, was without water, nor, in fact, was there any indication the City's own downstream licence was bereft.

DECISION:

The Panel is of the opinion that any water diverted from Joseph Creek under Conditional Water Licence No. 65169, can be considered to have as its source, the catchment area of Andrea Ceek, plus a small portion of the Joseph Creek drainage basin as far upstream as the next point of diversion. In the event that summer months are extremely dry and City releases from the reservoir are only sufficient for its own distribution system, for any additional City licences, and to provide for earlier downstream licences, then a regulatory system may be required. However, where the licence in question represents the only additional demand on Joseph Creek, such regulation does not appear to be an immediate necessity. The Panel considers that Mr. Trozzo's licensed diversion would not have any material affect upon the operation of the water supply system for the City of Cranbrook, or upon the release from the reservoir for prior licences. In addition, the City's priorities for water use are well protected through the licencing process which can be augmented by regulating procedures if and when considered necessary.

The appeal is dismissed.


G. E. Simmons, P. Eng.,
Panel Chairman
Environmental Appeal Board

November 6th, 1987