

ENVIRONMENTAL PROTECTION COMMITTEE MEETING  
Thursday, January 17, 1985  
4:30 p.m.

AGENDA

ITEM NO.	ITEM	NOTES
1	Terms of Reference for Environmental Protection Committee (see memo to City Administrator Jan 21, 85)	
2.	Heating Problems - Twp Fox Library North Rm 2.	

JAN 17 1985

**THE CORPORATION OF THE CITY OF PORT COQUITLAM**

**MEMORANDUM**

**TO:** B. Kirk,  
City Administrator

January 18, 1985

**FROM:** T.M. Chong, P. Eng.,  
Assistant City Engineer

**SUBJECT:** Terms of Reference for Environmental Protection Committee  
and Staff Resource Person

**RECOMMENDATIONS:**

1. Prior to proceeding with prosecution in matters of Environmental Protection, Council shall be briefed by the Environmental Protection Committee on the historical background and details of the infraction.
2. An additional \$2,500 be budgetted in 1985 as a separate item for Environmental Protection Contingency Fund.
3. The Assistant City Engineer be authorized to spend Contingency Funds budgetted for Environmental Protection in instances where mitigative measures have to be implemented quickly in dealing with pollution incidents of potential serious environmental consequences.
4. At the Council meeting immediately following an incident involving the expenditure of Environmental Protection Contingency Funds, Council shall be advised of the details of the incident.

**BACKGROUND AND COMMENTS:**

At its Committee meeting of January 14th, 1985 Council adopted several recommendations presented by the Environmental Protection Committee in its memorandum on this subject of the same date. The following recommendations were not adopted by Council:

1. The decision to prosecute in matters involving the Environmental Protection Committee rests with Council and not staff.
2. The Assistant City Engineer be authorized to expend City funds not previously budgetted in instances where mitigative measures have to be implemented quickly in dealing with pollution incidents with potential serious environmental consequences.

The Environmental Protection Committee met on January 17th, 1985 to discuss these two recommendations further.

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Regarding item 1, the Committee agreed that the wording was somewhat inappropriate in that they implied the delegation of a normal staff responsibility to members of Council. This, of course, was not the intention of the Committee. The intent behind this recommendation was to ensure that Council members will in fact be thoroughly informed of the background and ramifications of such prosecutions and that should Council, acting in the best interest of the Municipality, decide not to proceed with such prosecutions it may do so before charges are already laid by staff. Council should be aware that prosecutions in Environmental matters are very different from many of the other City matters such as parking violations, in that they are not only technically more complicated but they are also ill-defined by the law as to where the local government's authority extends. Also, in view of the fact that the nature of such prosecutions are often expensive and high profile, the Committee felt that council has the right to be thoroughly briefed prior to staff proceeding with such prosecutions. The Committee has therefore re-worded the recommendation to reflect this intent.


Regarding item 2, the Committee appreciates the difficulties of some members of Council in accepting the recommendation as presented. Again, perhaps the intent was incorrectly presented. To clarify; firstly, what the Committee in fact was asking is the authority necessary for the Staff Resource Person to meet his newly assigned responsibilities. Should Council decide that it is not the responsibility of the Staff Resource Person to respond and take the necessary actions in emergency environmental pollution problems then such authority to spend funds need not be given. However, the Committee felt that most members of Council would agree that should an emergency environmental pollution problem occur, the Staff Resource Person would be expected to respond and to take the necessary initial actions as required to alleviate the situation. For this reason, the authority for the Staff Resource Person to spend funds after such incidents is again recommended by the Committee. Secondly, to put to rest the concern that this authority may be subject to abuse in that the previous recommendation fails to identify where the funds will come from and how much the Staff Resource Person will be authorized to spend, the Committee makes the following recommendations:

1. An additional \$2,500 be budgetted in 1985 as a separate item for Environmental Protection Contingency Fund.
2. The Assistant City Engineer be authorized to spend Contingency Funds budgetted for Environmental Protection in instances where mitigative measures have to be implemented quickly in dealing with pollution incidents of potential serious environmental consequences.
3. At the Council meeting immediately following an incident involving the expenditure of Environmental Protection Contingency Funds, Council shall be advised of the details of the incident.

TMC/sgg

MAIN.R9

  
T.M. Chong, P. Eng.,  
Assistant City Engineer

JAN 17 1985  


RETAIN THIS COPY FOR FOLLOW-UP

FROM <b>T. CHONG</b>	DEPARTMENT <b>ENGINEERING</b>
<b>ALDERMAN GATES</b> <b>CHAIRMAN, ENVIRONMENTAL</b> <b>PROTECTION COMMITTEE</b>	DATE <b>JAN 18, 1985</b> SUBJECT <b>MEMO to Council</b> <b>terms of reference</b> <b>E.P. Committee</b>

MESSAGE

Attached please find a draft memo to Council on this subject. Please review the memo and advise me by Monday, January 21, 1985 if possible if you wish any revisions to be made. Should I hear nothing back by then, I will arrange to send this memo out to other members of Council in order that they will have ample time to read this memo before the <sup>Council</sup> Committee meeting of January 28, 1985.

, ASST ENG.

C.C. - B.R. KIRK  
CITY ADMINISTRATOR  
- ALDERMAN STEWART

JAN 17 1985

USE LOWER PORTION FOR REPLY

REPLY FROM

DATE



*Port Coquitlam*  
**Energy Information/Action Centre**  
1915 Pitt River Road, Port Coquitlam, B.C. V3C 1R2  
941-3411

ACTIVITY REPORT  
DECEMBER 1984

1.0. ACTIVITIES BY PROJECT

1.1. Internal Energy Management

- Municipal Seminar - scheduled for February 20, 1985. See attached Agenda
- Audit Report - Port Coquitlam Recreation Centre Audit Report copies available from the Centre. This report will be included in Municipal Seminar.
- City Hall HVAC Study - awaiting data from B.C. Hydro on 1984 consumption to compare 1982 (pre-retrofit measures) with 1984 (post-retrofit measures).

1.2. Supply-Side Projects

B.C. Regional Energy Management Task Force in Canadian Commercial and Office Buildings. - Yvonne involved in committee putting together Quarterly Newsletter to be distributed January 1985.

1.3. Demand-Side Projects

■ Consultations

New Construction	9
Retrofit	16
Other	4
Churchwarmings	2
TOTAL:	31

■ Site Tours/Inspections

- Toured Al Koehli's home under construction in White Rock.
- Inspected condensation problem in house. Severe water problem in ground of crawl space, coupled with neither a kitchen nor a bathroom exhaust fan.



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- School

Carol visited the Grade 5 class at Nestor Elementary School. They saw "A Piece of Sunshine" film, B.C. Hydro displays and discussed alternate energy.

- Thermography

Two evenings (rather, early mornings) spent thermographing 181 homes. Both VHS and Polaroid black and white prints taken. Questionnaires now coming in by return mail. Thermography evenings to be scheduled for January.

- Mail Drop

CHIP update dropped to 200 homes in Mary Hill area of Port Coquitlam.

- Churchwarmings

Grace Gospel Church - Arnold Shaw had previously visited Centre and installed caulking and weatherstripping in his own home. Discussed application of specific products.

St. Catherine's Anglican Church - Bill McCausland, a sheet metal worker, is familiar with draftproofing materials, so he visited our Centre for a tour and to pick up their Churchwarming Kit.

- Product Manual

Revision sent in for approval for HEP monies. 'Manual' will now be presented as an Appendix to the CHBA National Catalogue on Products and Services. Appendix will contain listings of distributors, manufacturers and retailers in B.C. organized according to region.

- Ventilation Product Showdown

Initial planning completed with invitations going out to all Canadian manufacturers of Air-to-Air Heat Exchangers, with carbon copies to their local distributors. Scheduled for March 7, 1985.

- Centre 'Continuation' Project

Our Centre has the advantage of being able to rely on some agencies and organizations to make use of some of our Centre displays and information after we close.

In order to disperse these materials to be best possible end user, we plan to have these groups sign a receipt of donation form which will state that the end user of the materials will make them accessible to the public in the same way that our Centre was able to. We also plan to take the time to fully explain to these end users how we see them making use of the materials.

### 3.0. Activities Planned

- Thermography Evenings - January
- Breathing Easy Seminars
  - Abbotsford in February
  - White Rock in March
  - Richmond in March
- Ventilation Product Showdown - March
- Municipal Recreation Seminar - February

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MONTH

**DECEMBER 1984**

TOTALS

Port Coquitlam  
Energy Information/Action Centre

TOTALS

VISITORS:	<b>44</b>
TOURS:	<b>—</b>
PHONE CALLS:	<b>126</b>
CONSULTATIONS:	<b>31</b>

SPEAKING ENGAGEMENTS:	<b>3(3)</b>
WORKSHOPS:	<b>—</b>
MEETING ROOM USE:	<b>—</b>

QUESTIONS	TOTALS
CHIP	<b>36</b>
COSP	<b>3</b>
RRAP	
CHP	
HYDRO LOAN	
HEATING	<b>3</b>
INSULATION	<b>16</b>
WINDOWS	<b>2</b>
CAULKING	<b>2</b>
WEATHERSTRIPPING	<b>10</b>
HEAT PUMPS	<b>1</b>
HEAT EXCHANGERS	<b>2</b>
GENERAL RETROFIT	<b>12</b>
WOOD FUEL SUPPLY	
WOOD STOVES	

QUESTIONS	TOTALS
SOLAR	
CONTRACTORS	<b>2</b>
OTHER BUSINESSES	<b>1</b>
NEW HOUSE CONSTRUCTION	<b>18</b>
COMPUTER SERVICES	<b>13</b>
REFERENCE MATERIAL	
PRODUCT INFORMATION	<b>1</b>
COSTS/PAY BACKS	
<b>CENTRE INFO</b>	<b>2</b>
<b>SEMINARS</b>	<b>3</b>
<b>CONDENSATION</b>	<b>7</b>
<b>RADIO PERS.</b>	<b>5</b>
<b>ENERGY TASK FORCE</b>	<b>1</b>
<b>MAIL DROP</b>	<b>1</b>
<b>THERMOGRAPHY</b>	<b>5</b>
<b>CHURCH WARMINGS</b>	<b>3</b>

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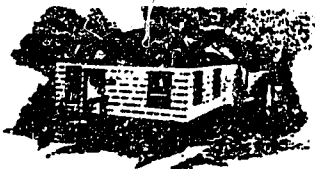
1984/85

Port Coquitlam  
Energy Information/Action Centre

SUMMARY OF ACTIVITIES

MONTH	VISITORS	TOURS	CONSULTATIONS		SPEAKING ENGAGEMENTS	WORKSHOPS	MEETING ROOM USE	ENERGY SHOWS
			IN-HOME	AT CENTRE				
APRIL	64	-	-	4	-	1(83)	-	-
MAY	78	-	-	11	-	2(13)	2(19)	-
JUNE	47	1(4)	-	new - 11 other - 1	-	2(5)	SOLAR WEEK DISPLAYS	-
JULY	42	-	-	new - 15 other - 6	-	-	-	-
AUGUST	37	-	-	new - 10 other - 8	-	-	-	PAMPHLETS AT RALE HOME SHOW
SEPTEMBER	47	1(3)	-	new - 16 other - 8	1(25)	-	-	PAMPHLETS AT HOME SHOW
OCTOBER	68	16(30)	-	new - 14 other - 17	1(12)	2(120)	-	PAMPHLETS AT HOME SHOW
NOVEMBER	58	2(3)	-	new - 14 other - 27	-	-	-	-
DECEMBER	44	-	new - 0 other - 2	new - 9 other - 20	3(36)	-	-	-
JANUARY								
FEBRUARY								
MARCH								
TOTALS:								

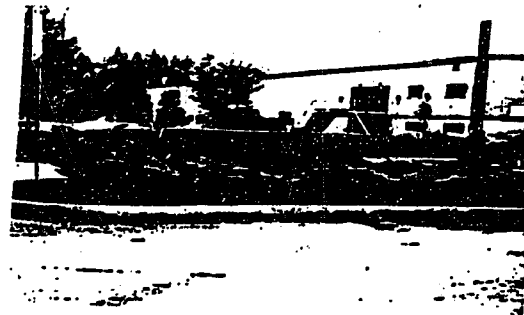
JAN 17 1985



*Fraser and Main  
House closed until*

**Port Coquitlam**  
**Energy Information/Action Centre**  
1915 Pitt River Road, Port Coquitlam, B.C. V3C 1R2  
941-5411

### ENERGY MANAGEMENT FOR RECREATION FACILITIES



DATE: WEDNESDAY, FEBRUARY 20, 1985  
TIME: 8:30 a.m. - 4:00 p.m.  
PLACE: TERRY FOX LIBRARY  
2470 MARY HILL ROAD, PORT COQUITLAM, B.C.  
(corner Wilson Avenue)  
COST: \$8.00 per person (includes lunch and coffee)  
RSVP: BY FEBRUARY 7, 1985

#### A G E N D A

8:30 - 9:00	Registration
9:00 - 9:15	Introduction
9:15 - 10:15	Recreation Facilities Audit, Monitoring and Measuring Energy Consumption - Bruce Joiner, Port Coquitlam Energy Information/Action Centre
10:15 - 10:30	Coffee
10:30 - 11:30	Energy Management for Swimming Pools - Lyle McClelland, P.Eng., B.C. Hydro
11:30 - 1:00	Lunch
1:00 - 2:00	Heat Recovery from Ammonia Refrigeration Units - Richard Green, P.Eng., President - Neptune Dynamics Ltd.
2:00 - 3:00	How To Save from Knowing What Watts - Ken McLeod, Adesco Design Ltd.
3:00 - 3:30	Question and Answer Period
3:30 - 4:00	Tour: Port Coquitlam Recreation Centre • Waste Heat Recovery System • Computer Control System

This Seminar will be of interest to City Engineers, Building Superintendents,  
Trades Foreman, Building Operators, Recreation personnel and Politicians.



Energy, Mines and Resources Canada  
Énergie, Mines et  
Ressources Canada

JAN 17 1985



The Corporation of the  
City of Port Coquitlam



Government  
of Canada

Gouvernement  
du Canada

Fisheries  
and Oceans

Pêches  
et Océans

Rm. 311-549 Columbia Street  
New Westminster, B.C.  
V3L 1B3

Your file Votre référence

Our file Notre référence

November 26, 1984

Mr. A. Griest  
Port Coquitlam Hunting and Fishing Club  
P.O. Box 122  
Port Coquitlam, B.C.  
V3C 3V5

Dear Mr. Griest:

RE: Hixon and Or Creek Diversions

Mr. Otway called me today and requested that I forward you a copy of the Department of Fisheries and Oceans' position on GVWD's proposed diversions of the above streams to the Coquitlam Reservoir. Please find attached our letter of October 1984 to the B.C. Water Management Branch.

Should you require any further information or clarification of our position as it relates to the protection of salmon please call me at 524-7146.

CITY OF PORT COQUITLAM  
ENGINEERING DEPT.

JAN 15 1985

FILE #

TO	FROM	DATE
TC	FW	

OEL/kmr

cc: F.J. Fraser  
D. Aurel  
B. Cox

Yours truly,

*Otto E. Langer*  
Otto E. Langer  
Head, Habitat Management Unit

COPIES: Council  
B.R. Kirk  
T.M. Chong

Note:

Circulated at the request  
of Ald. Gates - Jan 14, 1985

CITY CLERK

JAN 17 1985

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Rm. 311 549 Columbia Street  
New Westminster, B.C.  
V3L 1B3

File

Your file Votre référence

Our file Notre référence

October 15, 1984

J.E. Farrell  
Water Management Branch  
765 Broughton Street  
Victoria, B.C.  
V8V 1X5

Dear Sir:

RE: Application by GVWD to Divert Water from Hixon and Or  
Creeks

Further to our letter of June 28, 1983 and your inquiry of July 23, 1984, we can now provide you with an update of our assessment of the fisheries impacts that may be caused by the above applications if approved as applied for. In that the two diversions are relatively separate issues, I will comment on them as such.

Or Creek Diversion Proposal

Upon receipt of the application our initial review had indicated that little new data or knowledge was available on flow requirements in the Or Creek-Coquitlam River system beyond that presented in the 1978 Coquitlam River Water Management Study. As you are aware, recommendations were made in that report in respect of flow measurement and release flows into the Coquitlam River. Although a tentative flow formula was recommended in 1978 for Or Creek and the Coquitlam River, little has been done to try and achieve those recommended minimum flows during the past 6 years. Also the recommendation for installing a flow measuring device on Or Creek was not acted upon.

The application by the GVWD to divert additional flows from the last remaining major source of natural flow into the

Canada

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Coquitlam River puts great pressure on the remaining unlicensed flows in that over 90% of the total Coquitlam River flows are already committed to B.C. Hydro and diverted out of the system with no provision for minimum fishery flow releases out of their reservoir. The GVWD application covers much of the remaining natural flow in the river and puts fishery requirements into conflict with GVWD domestic water requirements. Specifically, approximately 6% of unlicensed water remaining in the system which is essential to the survival and the maintenance of fish production will be further reduced. The only way the two uses can possibly be accommodated would be by an agreed upon better seasonal release of available water. Unfortunately a lack of storage on Or Creek makes the delivery of assured minimum flows in Or Creek very difficult or impossible and should the reduced fishery water (ie proposed annual average flows of 24 cfs) be discharged to obtain maximum benefit, storage of water must be considered as part of the agreement. The diversion will remove some peak flows that can damage fish habitat, however, the diversion will affect base flows that are necessary to maintain and restore this river system.

It is apparent that the Or Creek diversion will divert maximum tunnel capacity (370 cfs) when available (50 cfs annual average) yet maintain residual flows for fishery purposes. Discussions with the GVWD have indicated that the point of release (ie Coquitlam Dam or Or Creek Diversion) of fishery flows is open for discussion.

Our studies during the past 14 months have indicated that the tentative minimum fishery flows recommended in 1978 for the lower Coquitlam River may be adequate estimates as minimum fishery flows for most purposes. At certain times of the year additional flows will possibly be required for fish protection, quality recreational fishing, and flows for flushing purposes. This formula however, does not represent flow needs to maintain or improve fish habitat in Or Creek and in the Coquitlam River immediately downstream of the dam.

The attempt to satisfy fishery flow needs as well as planned domestic water needs may be difficult or impossible if one only considers Or Creek flows even in combination with Coquitlam Reservoir storage. This will occur because not all Or Creek waters will be contained and released to a prescribed formula. Much of the fishery releases will occur when they are not needed and when available flows are less than those proposed in an realistic formula; the formula numbers are meaningless without storage. Water needs of all concerned parties may be impossible to meet unless all users are willing to contribute to and ensure that a minimum flow formula will occur so as to aid in the reestablishment of former fishery runs in the river and also serve hydro electric, domestic, flood control, and recreational needs.

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Simply trying to divide Or Creek waters between fishery-recreational needs and domestic supplies may be difficult without involving B.C. Hydro in the discussions and in an agreement on a flow release formula similar to that which was recommended in the 1978 Water Management Study. We believe this is necessary because until it can be shown to ourselves and the public that fishery production and other uses can be maintained or improved in Or Creek downstream of the point of diversion as well as in the Coquitlam River downstream of the dam and downstream of its confluence with Or Creek, we cannot support the proposed diversion at this time.

We are prepared to alter our position once it can be shown by the Water District that natural low flows in Or Creek below a certain agreed upon level can bypass and be available downstream of the proposed point of diversion. These minimum flows must be augmented by seasonal flush flows and a diversion structure that will allow free downstream bed-load movement. This is essential should downstream spawning areas have an assured recruitment source of spawning gravel.

#### Hixon Creek Diversion

Historical streamflow data is limited to the period of 1912-1920 as recorded on a daily or weekly basis. In 1972 and 1974 DFO conducted investigations for possible hatchery sites on the Indian River near the mouth of Hixon Creek. No recent records of salmon presence existed for Hixon Creek prior to our 1983-84 surveys.

The Indian River downstream of Hixon Creek supports extremely important runs of coho, pink and chum salmon and smaller populations of sockeye and spring salmon and steelhead trout. Over 50,000 adult salmon commonly spawn in this river and spawning populations of over 100,000 fish occur on peak years. Fish utilization in Hixon Creek is limited to the bottom 1 km. Our surveys have indicated that juvenile coho and trout rear in this section of Hixon Creek and small numbers of adult coho, pink and chum salmon also spawn in this area.

*[Signature]* JAN 17 1985

Available data indicates that the stream to be diverted (Belknap Creek which drains Belknap Lake) is a major tributary of Hixon Creek. Data for 1913 indicates that Belknap Creek contributes 10-74% of the flow to Hixon Creek (annual average 38%). The 1913 metering site on Hixon Creek above the bifurcation in the Hixon Creek fan is the same site used in the 1983-84 DFO studies. The empirical data collected in 1983/84 shows that Belknap Creek actually contributes 47 to 89% of the flow in Hixon Creek (annual average 75%). The difference in the data sets may be in part due to the clear cut logging that took place in the area. However, the difference is too significant to ignore. As well, realizing that Hixon Creek loses significantly more water to groundwater between the bifurcation and its mouth, a diversion of 100 cfs could greatly reduce surface flows in lower Hixon Creek which may harmfully alter fish habitat in late summer and early fall. For example on October 12, 1983, Hixon Creek flows (logging bridge) were measured at 14 cfs whereas the flow at its mouth was only 1.6 cfs. Any diversion of flows under such a flow regime would eliminate surface flow.

Data collected in 1983-84 demonstrates that the area of the Hixon Creek alluvial fan contributes significant groundwater inputs into the Indian River. This groundwater contribution is essential to the maintenance of the Indian River fishery resource and Hixon Creek flows will contribute to the annual recharge of the local groundwater reservoir. For example on October 12, 1983 the Indian River's flows increased from 40 cfs (50 m above Hixon Creek) to 100 cfs some 3900 m below Hixon Creek). Significant increases in flow due to groundwater inputs were recorded in each of four meterings below the confluence of Hixon Creek.

A review of 1912 data indicates that the contribution of Hixon Creek surface flows to the Indian River (as measured near its tidal mouth) is relatively minor. At this point of tidal influence, the cumulative effect of groundwater contributions to the Indian River would have reached its maximum while the Hixon Creek flows remained constant. Conversely, as the cumulative groundwater effect on the Indian River decreases in an upstream direction from its mouth, the contributions of Hixon Creek surface water becomes more significant to important salmon spawning beds.

Should the proposed Belknap Creek diversion be pursued, we recommend that the GVWD be requested to provide information that would show that if a diversion is to take place, fishery habitat in Lower Hixon Creek can be maintained. Also since the Indian River is often plagued by low natural flows for early salmon

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spawners in the August to mid October time period, the GVWD must demonstrate that the magnitude of the proposed or a reduced level of diversion will not further lower Indian River flows during this critical time period or during prolonged cold winter spells.

In conclusion we are very concerned that the Hixon diversion can have greater impacts on the fisheries resource than the Or-Coquitlam diversion and presents less opportunity for mitigation - or compensation options. Our discussions with the Water District has indicated that their consultants are developing a computer model and have prepared a series of hydrographs to address certain of the above concerns that we have identified. Our concern with these studies is that they are not based on good empirical data. We have suggested to the Water District that probably adequate data and an understanding of possible impacts exist so as they can consolidate the material into a format to address our concerns and present mitigation or compensation measures where necessary. As indicated to the GVRD over a year ago it is still our feeling that additional field collections of hydrologic data is required at a number of points on these systems to properly relate to and agree on various discharge formulae.

Once this is done, we will be prepared to re-assess our position on these diversion proposals. However, until this information is made available - and it can be shown that our concerns can be addressed, the water license applications should not be granted at this time.

Yours truly,

*Otto E. Langer*  
Otto E. Langer

Head, Habitat Management Unit

OEL/kmr

cc: F.C. Boyd  
F.J. Fraser  
B. Cox  
IPSFC  
D. Aurel  
S. Roxburgh

*DF* JAN 17 1985