

## OKANAGAN BASIN WATER BOARD

**MINUTES OF A SPECIAL MEETING OF THE OKANAGAN BASIN WATER BOARD HELD IN THE BOARD ROOM OF THE REGIONAL DISTRICT OF CENTRAL OKANAGAN, 540 GROVES AVENUE, KELOWNA, B.C., ON TUESDAY JANUARY 23RD, 1990 AT 1:00 P.M.**

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**PRESENT:** Director R. Shewfelt            Regional District of Okanagan-Similkameen.  
Director D. Whittaker            Regional District of Okanagan-Similkameen.  
Alt. Director M. Radi            Regional District of Okanagan-Similkameen.  
Director S. Simpson            Regional District of Central Okanagan.  
Director E. Lamont            Regional District of Central Okanagan.  
Director G. Waldo            Regional District of Central Okanagan.  
Director E. Reich            Regional District of North Okanagan.  
Director A. Hill            Regional District of North Okanagan.  
Director M. Friesen            Regional District of North Okanagan .

**STAFF:** P. Mackiewich            Administrator  
G. Armour            Field Supervisor

The Administrator called the meeting to order and listed the appointments to the Okanagan Basin Water Board as follows:

Regional District of Okanagan-Similkameen:  
-Director D. Whittaker  
-Director R. Shewfelt  
-Director J. Piazza  
-Alternate Director M. Radi

Regional District of Central Okanagan  
-Director S. Simpson  
-Director E. Lamont  
-Director G. Waldo  
-Alternate Director W. Gray  
-Alternate Director J. Stuart

Regional District of North Okanagan  
-Director M. Friesen  
-Director A. Hill  
-Director E. Reich  
-Alternate Director E. Hornby  
-Alternate Director H. Norris

**Election of Chairman:**

The Administrator explained that although this was a special meeting called solely to discuss the role and objectives of the Okanagan Basin Water Board, it was necessary to elect officers at the inaugural meeting of 1990.

The Administrator called for nominations for Chairman and Director Shewfelt nominated Director Simpson.

There being no further nominations, Director Simpson was declared Chairman of the Okanagan Basin Water Board for 1990.

Director Simpson took the chair and called for nominations for Vice-Chairman.

**Election of Vice-Chairman:**

Director E. Lamont was nominated for Vice-Chairman by Director Reich. There being no further nominations, Director Lamont was declared Vice-Chairman of the Okanagan Basin Water Board for 1990

**Aquatic Plant Management Committee:**

The Administrator advised that this working group was traditionally composed of one representative from each Regional District, the Chairman being included. In addition, Staff members include the Administrator, the Field Supervisor, and two representatives of the Water Management Branch. The Chairman agreed to represent the Central Okanagan Regional District. Director Shewfelt then nominated Director Whittaker to represent the Regional District of Okanagan-Similkameen. No further nominations were received and Director Whittaker was elected.

Director Reich was nominated to represent the Regional District of North Okanagan. No further nominations were received and Director Reich was elected.

The Aquatic Plant Management Committee for 1990 consists of:

- Director D. Whittaker
- Director E. Reich
- Chairman S. Simpson

Director Friesen entered the meeting

**Signing Officers:**

Moved by Director Lamont, seconded by Alternate Director Radi:

"Whereas it is desirable for the Okanagan Basin Water Board (hereinafter called the 'corporation') to authorize certain of its officers to, inter alia, sign cheques, deposit promissory notes and cheques, receive paid cheques, obtain and deliver from the Corporation's bankers copies of all or any stocks and bonds;

Now therefore the Corporation hereby enacts as follows:

That all cheques of the Corporation drawn on its current account be signed on its behalf by S. Simpson, Chairman; E. Reich, Director; E. Shipmaker, N.O.R.D. Chairman, and P. Mackiewich, Secretary-Treasurer (any two to sign);

That P. Mackiewich, Secretary-Treasurer of the Corporation be, and is hereby authorized for and on behalf of the said Corporation to negotiate with, deposit with or transfer to the Bank of Montreal (but for the credit of the said Corporation only) all or any Bills of Exchange, Promissory Notes, Cheques and Orders for the payment of money and other negotiable paper, and for the said purpose to endorse the same or any of them on behalf of the said Corporation, either in writing or by rubber stamp, and further that all cheques under the sum of \$5,000.00 may be mechanically signed by any of the above officers;

That P. Mackiewich, Secretary-Treasurer, be and is hereby authorized for and on behalf of the said Corporation from time to time to arrange, settle, balance, and certify all books and accounts between the said Corporation and the Bank; to receive all paid cheques and vouchers, unpaid and unaccepted bills of exchange and negotiable instruments;

That P. Mackiewich, Secretary-Treasurer be and is hereby authorized for and on behalf of the said Corporation to obtain delivery from the said Bank of all or any stocks, bonds and other securities held by the Bank in safekeeping or otherwise for the account of the said Corporation and to give valid and binding receipts therefore;

That this resolution be communicated to the said Bank and remain in force until written notice to the contrary shall have been given to the Manager for the time being the Branch of the Bank at which the account of the said Corporation is kept and receipt of such notice duly acknowledged in writing."

CARRIED.

**Role and Objectives of the Water Board:**

Chairman Simpson addressed the Board regarding the results of a questionnaire circulated to communities by the Okanagan Mainline Municipal Association, which identified water quality and quantity as major concerns of all respondents. She suggested that this concern form the basis for discussion of the Water Board mandate.

The Administrator noted that a member of the press was present, and asked the Board if it wished that the meeting be held in camera as he had advised other members of the press that this would be the case.

Moved by Alternate Director Radi, seconded by Director Reich:

" That in the interest of fairness, the member of the press be asked to leave and the meeting continue in camera."

CARRIED

Discussion the arose as to future meeting dates and Alternate Director Radi suggested that a list of proposed meeting dates be prepared.

The Board agreed that a regular business meeting be arranged and that this meeting be regarded as additional to the schedule. The Administrator outlined the objectives of the Water Board as detailed in 1970 and pointed out changes made in the review conducted in 1982. He stated that the Board has the option to exerise much broader powers than weed control and sewage assistance grants should it wish to do so.

The Chairman asked for comments on whether there is a continuing role for the Water Board.

Director Shewfelt indicated that he felt more significant Federal involvement should be forthcoming, in view of the magnitude of water quality concerns in this valley.

Director Lamont referred to a minority report (attached) that he had circulated to the Board prior to the meeting. He said that he felt that some of the largest contributors to the Water Board, in terms of finances, did not perceive the true benefits and uniqueness of this Board, and that the Directors should strive to make this more apparent.

Director Hill stated that the taxpayers perception of the Water Board should be considered, and that right now it appears to be a weed cutting agency only. He felt that the Board had failed badly in other areas.

The Chairman urged the Board to identify priority items in the list of objectives.

Director Friesen questioned the function of the Board as a financing agency for sewage works and proposed that it enhance its performance in weed control before taking on other jobs.

Director Shewfelt indicated that he felt that aquatic weed control and nutrient control go together.

Director Whittaker referred to current studies in Penticton which indicate a lowering of water quality. She felt that the Board should participate in such information gathering studies.

Alternate Director Radi suggested that other groups could become involved in areas where the Board lacks finances. He also questioned whether the Board should finance sewer facilities.

Director Shewfelt replied that this might fragment the Board and result in less effectiveness.

Director Hill criticized the Board for past wasteful expenditure of funds on some sewage works at the expense of other communities who may need the money.

Director Friesen objected to the payments made by certain electoral areas to the sewage facilities assistance fund when they do not benefit directly. He suggested that the Board be involved in establishment of policy but not in financing.

Director Hill disagreed, saying that taxpayers are willing to pay providing they perceive the benefits. (anywhere)

Alternate Director Radi referred to Objective #7 as a possibility for involvement in lobbying for establishment of policies.

Director Lamont mentioned the setting up of

houseboat regulations as a positive example of Water Board involvement.

Director Hill stated that without detailed knowledge of the plans of each community, such involvement was not practical.

Director Reich affirmed his impression that the Water Board scope was limited to weed control and funding of sewage treatment. He indicated that he would like to see more emphasis on water quality matters such as septic tanks and treatment systems.

Director Whittaker proposed that the Board should invite Environment Minister John Reynolds to a meeting especially in view of his statement that he opposes any effluent, treated or otherwise, entering the lakes.

The Board reviewed the objects and purpose document briefly, with some discussion arising over the first point and the mandate of the Board to organize and receive proposals.

Director Waldo questioned the role of the Board in receiving proposals. Would it be acting as an approving agency or in another capacity?

The Administrator pointed out that whether we want them or not, we will continue to receive proposals.

Director Whittaker stated that the workload could be enormous if all submissions were received. She recognized that the lack of technical staff limits the Board in screening proposals and suggested that the wording of this item be changed.

The chairman pointed out that the object paper was drafted in 1970, and perhaps changes were in order.

The Administrator pointed out that the Letters Patent would require changes should the Water Board objectives be altered. He did not, however, envision any problem with the Regional Districts.

Discussion arose as to the lack of ability of the Water Board to operate independently of the three Regional Districts.

Chairman Simpson referred to the 1982 review of  
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Water Board objectives and asked whether the points listed in number six could remain as goals of the Board, even if not immediately implemented.

These points are:

- (a) Water quality in the entire watershed
- (b) Future quantity of water in the Water Basin
- (c) Disposal of sewage
- (d) Septic tank regulations (not enforcement)

The Chairman called for a show of hands to indicate whether the Letters Patent should be left as is and the Board agreed.

Director Friesen expressed a specific concern regarding septic tank regulations, and wondered if the Board should retain a consultant to conduct a study.

The Administrator suggested that more information be gathered from the agencies currently involved prior to taking on such a task.

Director Waldo identified water dispersal as the area in which he felt additional information was required. This would include material pertaining to effectiveness of municipal treatment systems, as well as septic tanks.

It was the suggestion of the Chairman that a time period be allocated at subsequent regular meetings to hear from speakers on these topics. Media contact should be made to let the public know that the emphasis of the Board will shift or be renewed in areas of water quality, with specific attention to methods of sewage disposal.

Director Shewfelt suggested that a press release be prepared by the Chairman so that all members of the Board would focus their comments to the media on the same issues.

#### **Fiscal year 1989-1990 Budget:**

Mr. Armour asked that one item of routine business be dealt with. He advised that funds for the current Fiscal Year were nearly exhausted as mild weather conditions had permitted continuous operation of derooting equipment through a period when shutdown normally occurs. Mr. Armour listed options for the remainder of the fiscal year. (until March 31st)





## Minority Report to the Okanagan Basin Water Board

The Okanagan Basin Water Board is still the best vehicle for preserving our unique Okanagan environment.

It is very important that the Okanagan Basin Water Board be the co-operative spirit in causing communities to work together to ensure that water management and water quality be maintained in our environmentally sensitive valley.

The demands for water, with the advent of the Coquihalla and its connectors, will be significant. Success of tourism depends directly on water quality. The Okanagan Basin Water Board does have a role and must be supported.

Respectfully submitted,

Eain Lamont  
Director

January 23, 1990

OKANAGAN BASIN WATER BOARD

MINUTES OF A MEETING OF THE OKANAGAN BASIN WATER BOARD  
HELD IN THE COUNCIL CHAMBERS OF THE CITY OF PENTICTON, 171  
MAIN STREET, PENTICTON, B.C., ON TUESDAY, FEBRUARY 6TH,  
1990, AT 1:00 P.M.

PRESENT:

|                         |                          |
|-------------------------|--------------------------|
| Chairman S. Simpson     | Cent. Okan. Reg. Dist.   |
| Alt. Director E. Hornby | North Okan. Reg. Dist.   |
| Director E. Reich       | North Okan. Reg. Dist.   |
| Director A. Hill        | North Okan. Reg. Dist.   |
| Director D. Whittaker   | Okan. Similk. Reg. Dist. |
| Director J. Piazza      | Okan. Similk. Reg. Dist. |
| Director R. Shewfelt    | Okan. Similk. Reg. Dist. |

ALSO PRESENT:

|                      |   |
|----------------------|---|
| Alderman M. Morrison | Peachland   |
| Mr. Brian Hayward    | Constituency Assistant<br>( M.P. Lyle McWilliam ) |
| Mr. Jim Beattie      | Constituency Assistant<br>( M.P. Jack Whittaker ) |
| P. Mackiewicz        | Administrator                                     |
| G. Armour            | Field Supervisor                                  |

STAFF:

MINUTES:

Moved by Director Shewfelt and seconded by Director  
Piazza:

"That the minutes of a regular meeting of the  
Okanagan Basin Water Board held on November 21st,  
1989, be adopted as circulated."

CARRIED.

Moved by Director Reich, seconded by Director  
Whittaker:

"That the minutes of a special meeting of the  
Okanagan Basin Water Board held on January 23rd,  
1990 be adopted as circulated."

CARRIED.

DELEGATIONS:

Okanagan Water Quality Control Project:

Mr. Dick Nickel and Mr. Phil Epp of the Ministry of  
Environment, Okanagan Water Quality Control Project  
outlined the status of new septic tank regulations  
for environmentally sensitive zones.

MR. NICKEL &  
MR. EPP

Mr. Nickel explained the the Water Quality Control  
Project was established four years ago, based on  
initiatives from the Valley and from the Ministry  
of Environment, and was intended to reduce nutrient  
loading from sewage treatment plants and other  
sources, septic tanks included. A waste management  
program was initiated to determine options for  
remedies and costs. Waste management plans for major  
centers will likely be completed by the end of the  
Project, but not those for outlying areas. The goal  
is to end up with a long term waste management  
strategy to maintain or improve water quality in  
the Valley.

This strategy must incorporate plans for areas with  
sewer systems and those on septic tanks. In  
conjunction with the Ministry of Health, a set of  
enhanced regulations for septic tanks in sensitive  
areas was developed and the final draft is now with  
Treasury Board.

Mr. Epp described the enhanced septic tank regulations which should soon be passed through Order in Council. He stated that septic tanks are now a major source of phosphorus loading rather than sewage treatment plants. While not all septic tanks contribute to this loading, the main interest is in stronger standards in problem areas. The Implementation Board recognized this in 1975 when they recommended enhanced regulations which were never implemented. The new committee set out to draft regulations based on this document.

Mr. Epp outlined the changes made to the original recommendations which proposed enhanced regulations for a 300 foot (100 m) area around all waters. This has been modified according to soil characteristics to establish sensitive and less sensitive areas which may permit effective septic tanks within the 300 foot zone, and others where greater setback is necessary.

The Chairman questioned whether there was any jurisdiction for such regulations on Indian Reserve lands and Mr. Epp replied that there is not and this problem is recognized.

The current Ministry of Health standard for septic tank setback is 100 feet (30 m) so the new guidelines would represent a significant upgrading.

Mr. Epp distributed the draft of the new Septic Tank Regulations (attached) and offered to go through the document with the Board.

He stated that the regulations are intended to apply to all new subdivisions after the legislation is enacted, and that vacant lots may be exempted.

Director Piazza questioned whether voluntary compliance of vacant lot owners could be sought.

Mr. Epp indicated that this could occur but that regulations would not be enforced to the extent that lots bought in good faith under the existing regulations would become un-buildable.

Director Shewfelt asked if this represented the complete document or if the concern of phosphorus loading from upland sources was addressed elsewhere.

Mr. Epp advised that he was not aware of another document and Mr. Nickel further commented that the Ministries of Municipal Affairs and Health have discussed the hydraulic concerns of upland subdivisions.

Under the section titled Requirements for Permits Mr. Epp observed that Section (b) is new in that the original Implementation Board regulations were inflexible in sensitive areas as far as setbacks. This section allows for source reduction of phosphorus to reduce setbacks.

He described how Table 1 recognizes the combination of percolation rate and soil depth with setbacks ranging from 30 m to 150 m.

In addition, horizontal distances (Point #3) offers another option for reduced setback in sensitive areas with an increase in field size.

To summarize, a property owner or developer has the following options in environmentally sensitive areas for septic tank installation:

- meet the setback requirement
- upgrade phosphorus removal onsite
- increase the field size

The Chairman questioned whether a lot of foreshore land would not be developed under these regulations.

Director Reich agreed that a major portion of phosphorus loading is from septic tanks but questioned how this can be alleviated by addressing new development only.

Mr. Epp indicated that existing fields will not be affected but that the new legislation should keep loading from increasing. The judgement was made by the technical group drafting the regulations that forcing existing septic tanks to comply might jeopardize the entire legislation.

Director Reich suggested that public opinion was substantially different now than in 1979.

The Administrator commented that new setbacks must correlate with zoning bylaws and was it the intent of the legislation to have every lot in a development perc. tested?

Mr. Epp answered that it would be preferable if local government recognized the new standards and weeded out non-complying areas prior to review by the Ministry of Health. He said that perhaps large parcels may need more comprehensive testing. Director Hill observed that detergents represent the largest phosphorus source in septic tanks and asked what else contributes to the phosphorus levels?

Mr. Epp advised that sources of phosphorus vary, but that in general consist of:

- one-third detergent
- one-third blackwater (human waste)
- one-third dishwasher detergent

He pointed out that 2.2% is the Canadian standard for phosphorus in laundry detergents while 0.5% is the standard for the same in the Great Lakes region of the U.S. A 25% reduction in phosphorus could therefore be achieved by switching to phosphate free detergents. Dishwasher detergents are not regulated at present, and perhaps should be, as this would result in another potential 25% phosphorus reduction.

Moved by Director Hill and seconded by Director Whittaker:

"That the Okanagan Basin Water Board urge the Provincial Ministry of Environment to enact legislation making the use of phosphate-free laundry and dishwasher detergents mandatory."

CARRIED.

Mr. Epp then discussed the section of the new regulations dealing with repair or alteration of existing systems. He said that they had originally looked at universal application of the new standards to systems that malfunction, this was opposed by the Ministry of Health. A minimum standard of repair to a state where a health concern no longer exists was agreed to. Any expansion or alteration of an existing field, however, must comply with the new regulations.

The Ministry hopes for implementation of these sewage disposal regulations by late spring or early summer of 1990. The Ministry is aware that the constraints imposed by the new document on citizens and developers will come to local government and that is why Water Board support is necessary.

Director Whittaker was pleased that the regulations applied to new subdivisions but was concerned that lower standards still apply to existing fields, since a reduction in total phosphorus loading is necessary, not just maintenance of the current level.

Mr. Epp noted that if the Water Board felt the Ministry of Environment has not gone far enough, a letter to the Minister would be appropriate since changes in public opinion have undoubtedly taken place in the three years since the drafting of the regulations.

Director Reich supported the position taken by Director Whittaker and suggested the Board address existing systems on a phasing-in basis. In order to correct environmental problems, strong measures must be taken.

Moved by Director Whittaker, seconded by Director Reich:

"That letters be sent to the Ministries of Environment and Health urging preparation of proposals to address existing septic tank systems in sensitive areas, as well as those in new developments."

CARRIED.

Director Piazza stated that he would rather see a sewage collection system in these sensitive areas than septic tanks. He envisioned problems with small size lots and the new requirements.

Director Hill expressed concern that the intent of the motion could not be enforced.

Mr. Nickel advised the Board that the Ministry of Health had explained their reluctance in enforcing stricter standards on existing systems as the incremental benefits achieved might jeopardize the entire program.

Director Whittaker agreed that the establishment of sewage systems should be encouraged, but where there is no alternative in these sensitive areas, we must address existing septic systems. She then suggested a meeting with the Ministry of Health to determine if these problems can be addressed.

Moved by Director Shewfelt, seconded by Director Whittaker:

"That the Water Board should support the Ministry of Health in hiring additional staff to inspect new and existing septic tank installations."

CARRIED.

The Administrator suggested that the building inspectors perform this function, as they are already on the construction sites.

Director Shewfelt advised that that request was made of the Ministry of Health by the Municipality of Summerland and turned down.

Director Hill commented that malfunctioning septic tanks must be repaired, but that in many cases, reports of problems are based on hearsay or are difficult to pinpoint.

Alternate Director Hornby inquired as to what ratio of undeveloped raw area defined as sensitive is not already served by septic tanks?

Mr. Epp replied that many of the most sensitive areas are already developed and although data is not available, he would estimate that half of such areas remain undeveloped.

Alternate Director Hornby then asked how the nutrient loading from agricultural and forestry practices compares to that from sewage treatment plants and septic tanks.

Mr. Epp summarized phosphorus loading as follows:

|  | 1970       | 1988      |
|--|------------|-----------|
| Total Loading                                    | 120,000 kg | 80,000 kg |
| Sewage Plants                                    | 60,000     | 12,000    |
| Septic Tanks                                     | 10,000     | 20,000    |
| Natural Components<br>(Agriculture and Forestry) | 50,000     | 50,000    |

Director Hill asked if these figures were from studies or were estimates?

Mr. Nickel stated that the sewage figures were absolute, while the septic tank figures were estimates.

The Chairman thanked Mr. Epp and Mr. Nickel for their presentation and reiterated the Board's support for enhanced septic tank regulations.

Alternate Director Hornby then raised the issue of the dispute between Armstrong and Spallumcheen and indicated that Armstrong Council had wondered what role the Water Board might play in finding a solution. He briefly described the situation where the Waste Management Branch wants a spray irrigation component to the Armstrong Waste Management Plan that would involve disposal on a neighbouring municipality. (Spallumcheen) This has not been acceptable to date. He suggested that the Water Board might indicate ways in which Spallumcheen does benefit, even though indirectly, from the Waste Management Plan.

Director Piazza described a petition by an Electoral Area in Osoyoos to join onto the Municipal treatment system which was turned down. He indicated that perhaps the benefits to all residents were not perceived in this instance as well.

Director Shewfelt felt that the Board should stand by its mandate to improve the quality of water in the lakes system, regardless of jurisdictional boundaries.

Director Whittaker stated that it was very necessary that the Armstrong situation be resolved and proposed that elected officials and Ministry of Environment staff be invited to discuss the Waste Management Plan for Armstrong.

Director Reich advised that he would like the Water Board to assist even if it means resolving the standoff by accepting the second best alternative.

Director Shewfelt left the meeting at 3:15 p.m.

Moved by Director Hill and seconded by Director Reich:

"That Armstrong, Spallumcheen, and the Ministry of Environment be invited to the next regular meeting to explain their positions, and develop alternatives for resolution of the waste management dispute."

CARRIED.

Director Whittaker left the meeting at 3:30 p.m.

Discussion arose concerning the length and frequency of meetings and Director Piazza wondered whether monthly meetings were in order.

Director Hill suggested starting meetings in the morning in order to give proper consideration to all items on the agenda, but retain the framework of six meetings per year.

The Chairman suggested a trial of this suggestion at the next regular meeting.

CORRESPONDENCE:

MR. R. NICKEL: Phosphorus Control:

A letter from Mr. R. Nickel of the Okanagan Water

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Quality Control Project describing the new septic tank regulations was received.

The Chairman questioned whether each director might wish to discuss the incorporation of these regulations into local bylaws, with their respective Boards and Municipalities.

The Administrator pointed out that these regulations must be incorporated to be effective.

RDCO FORESHORE PLAN: Foreshore Plan:

A copy of the proposed Foreshore Plan for the Regional District Of Central Okanagan was received and the Field Supervisor indicated that he had reviewed the document and forwarded comments pertaining to aquatic weed control.

Moved by Director Piazza, seconded by Director Reich:

"That the copy of the Foreshore Plan be received and filed."

CARRIED.

DR. J. BRYAN: Sediment Testing in Kelowna:

A letter from Dr.J.E.Bryan, of the Ministry of Environment, indicated that the City of Kelowna request for lake sediment testing could not be accomodated due to lack of sufficient funds.

The letter also stated that unless a real need for such testing was apparent, it would not likely be done.

A letter from Mr. R. A. Nickel, of the Waste Management Branch, pertaining to the same subject, was also received.

The Chairman indicated that she was not happy with this reply.

Moved by Director Reich, seconded by Director Piazza:

"That the letters be received and filed, and that a follow-up letter be sent in view of the unsatisfactory reply."

CARRIED.

M.L.A. BARLEE: Congratulations to Board on Efforts to Obtain Funds for Aquatic Weed Removal:

Mr. Bill Barlee, M.L.A. for Boundary - Similkameen congratulated the Water Board on its efforts to obtain additional funds for control of aquatic weed growth in the Okanagan.

Moved by Director Reich, seconded by Director Piazza:



"That the letter from Mr. Barlee be received and filed."

CARRIED.

MR. MAXNUK: Aqua Research and Developments Inc.:

Mr. Mel Maxnuk, of the Water Management Branch forwarded a copy of a report, prepared by Aqua Research and Developments Inc., pertaining to aquatic weed removal work done by that company in Alberta. Mr. Maxnuk's letter stated that the Board might wish to consider this "track record" as an indication of the capabilities of the equipment, and not require the Company to perform an unpaid test.

The field supervisor advised the Board that this letter was written at a time when one of our machines was broken down, and that Mr. Maxnuk's concern was that work go on while funds were available.

As the Board is aware, the mild winter conditions have allowed non-stop equipment operation through the normal shutdown period, and therefore we face a shortage of funds and not the reverse.

Moved by Director Reich, seconded by Director Piazza:

"That the letter from Mr. Maxnuk be received and filed."

CARRIED.

M.P. McWILLIAM: Continued Efforts to Obtain Federal Government Funds:

A letter from M.P. Lyle McWilliam was received describing his efforts to obtain Federal funding for control of aquatic weeds.

So far, his efforts have not met with success, but he stated that he is committed to pursue the matter.

Moved by Director Reich and seconded by Alternate Director Hornby:

"That the letter be received and filed."

CARRIED.

The Chairman expressed her thanks to Mr. McWilliam for his continued interest and support of our program.

The Chairman also indicated that a letter had been sent to the new Provincial Minister of Environment, congratulating him on his appointment, and requesting clarification of the status of our enhanced budget request.

SEWAGE FACILITIES ASSISTANCE GRANTS:

The Administrator explained to the Board that the exact amount of sewage grants cannot be calculated until all requests are received due to the diminishing status of the fund.

Directors Hill and Reich questioned the precise nature of the sewage works being funded by the Board, and requested that in the future, more details be provided on each grant application received by the Water Board.

The Administrator advised that this should apply to grant applications received for the next fiscal year since funds have already been paid for the current year.

Moved by Director Reich, seconded by Alternate Director Hornby:

"That detailed information as to the nature of the construction being funded, be provided for all future grant applications."

CARRIED.

Moved by Director Reich, seconded by Director Piazza:

"That the following Sewage Facilities Assistance Grants be approved for payment:

|                            |               |
|----------------------------|---------------|
| City of Vernon             | \$85,184.54   |
| City of Kelowna            | \$320,353.35  |
| City of Armstrong          | \$13,071.17   |
| District of Coldstream     | \$45,735.25   |
| Town of Osoyoos            | \$28,291.61   |
| City of Penticton          | \$45,999.55   |
| Reg. Dist. of Okan-Similk. | \$19,482.64." |

CARRIED.

NEW AND UNFINISHED BUSINESS:

Status of the Enhanced Budget:

The Chairman expressed her willingness to pursue this matter with the Minister of Environment at the Environmental Forum, to be held on February 16th. This was agreed to by the Board.

Proposed Schedule of Meetings:

A tentative schedule for future regular meeting dates was provided to the Board. (attached)

The Board agreed to the next date of April 3rd, at 10:00 A.M., and will discuss meeting length and frequency further.

Video Presentation: "The Underlying Threat":

This presentation was deferred to the next meeting due to a lack of time.

Further Business:

The Chairman reported on a conversation with Mr. Barry Parker, Administrator of The Okanagan Tribal Council, who wishes to meet with the Board and jointly put on a forum concerning water resources. He suggested that a spokesperson for the Board attend and the Chairman was instructed by the Board to do so.

OTHER MATTERS:

Staff salaries for 1990 -1991:

The Administrator advised that the issue of staff salaries will be discussed at a Planning Committee meeting, and a recommendation made to the Board.

Appointment of a Technical Committee:

The Chairman outlined a suggestion made by the Administrator, that the Board draw on staff of Municipalities and Regional Districts in areas where it lacks technical expertise or advice.

Director Hill inquired as to what matters this committee would advise on.

The Administrator indicated that current matters before the Board include the Central Okanagan Foreshore Plan and Septic Tank Regulations.

Director Reich felt we should call in the necessary "experts" when required.

Moved by Director Reich and seconded by Director Piazza:

"That the Water Board call on technical personnel as required"

CARRIED.

Director Hill commented that the version of the news release on the new role of the Water Board was terrible, as reported in Vernon. He also reported that he had received a call from M.P. J. Whittaker's office regarding an expert on biological control of aquatic weeds, Dr. Peter Harris, in Saskatchewan.

The Administrator asked the Board that the North Okanagan Regional District be granted a 5% increase in the administration fee charged for the Water Board for 1990 -1991.

Moved by Director Reich, seconded by Director Hill:

"That the North Okanagan Regional District be granted a 5% increase in the Water Board administration charge for 1990 -1991."

CARRIED.

ADJOURNMENT:

The meeting was adjourned at 4:05 p.m.

*P*

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CARRIED.

ADJOURNMENT:

The meeting was adjourned at 4:05 p.m.

  
CHAIRMAN

  
SECRETARY - TREASURER

PROVINCE OF BRITISH COLUMBIA

ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No.

, Approved and Ordered

Lieutenant Governor

DRAFT 1/

Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that the Sewage Disposal Regulation, B.C. Reg. 411/85, is amended as set out in the attached schedule.

Minister of Health

Presiding Member of the Executive Council

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: Health Act, section 5 (1) (a) (i) (ii)

Other (specify): O.C. 2398/85

September 26, 1989

/89/10/aaa

Draft 1 - September 26, 1989

### SCHEDULE

1. Section 1 (1) of the Sewage Disposal Regulation is amended

(a) by adding the following definitions:

"controlled lake" means any body of nontidal water whose water level is, or can be, adjusted by man made barriers installed to regulate water flow;

"high water mark" means a point on the shoreline which corresponds

(a) for a controlled lake, to the highest water level within the normal operating range for that lake, and

(b) for any other body of nontidal water, to the average highest water level calculated from measurements taken over a sufficient number of years to enable a fair and reasonable estimate;

"impervious layer" means any soil having a percolation rate slower than 30 minutes per 2.54 cm when determined in accordance with section 1 of Schedule 1; , and

(b) by repealing subsection (1.1).

2. Section 1 (b) (x) of Schedule 1 is repealed.

3. The following Schedule 4 is added:

### SCHEDULE 4

### ENVIRONMENTAL CONTROL ZONES

#### Interpretation and application

1. (1) In this schedule

"absorption field depth" means the minimum vertical distance from the finished surface grade of the absorption field to the underlying

(a) impervious layer,

(b) bedrock, or

(c) groundwater table.

*soil depth?*

*Repealed to 10 ft  
least 10 ft from surface  
to 10 ft from surface*

whichever is uppermost;

"body of water" means any nontidal lake, canal, spring or flowing body of fresh water;

"Environmental Control Zone" means a geographic area prescribed in the Appendix;

"malfunctioning sewage disposal system" means a sewage disposal system which creates a health hazard.

(2) This schedule applies to

(a) every sewage disposal system for which a permit is required under section 3 of the regulation after the date this schedule comes into force, and *except for recent lots*

(b) ~~every malfunctioning sewage disposal system,~~

~~within an Environmental Control Zone.~~

(3) Where there is a conflict between the provisions of this schedule and a provision in the regulation or another schedule, the provisions of this schedule apply.

**Requirements for permit**

2. A permit will not be issued under section 3 of this regulation unless,

(a) in the case of a conventional sewage disposal system, the system

(i) has at least 70 cm of undisturbed, natural soil beneath the trench containing the drainage pipe, and

(ii) complies with the minimum distances specified in Table 1, or

(b) in the case of an on site phosphorus reduction sewage disposal system, the Ministry of Environment has verified that the system is capable of continuously removing at least 80% of the initial concentration of phosphorus.

??  
only where this  
is more stringent.  
e.g. 20 m  
depth from finished  
grade.

TABLE 1

Minimum horizontal distance (metres) between the absorption field and the high water mark of any body of water within an Environmental Control Zone.

| Percolation Rate<br>(minutes/2.5 cm) | Absorption Field Depth (m) |                        |                        |                        |            |
|--------------------------------------|----------------------------|------------------------|------------------------|------------------------|------------|
|                                      | $\geq 1.2$ but $< 1.8$     | $\geq 1.8$ but $< 2.4$ | $\geq 2.4$ but $< 3.6$ | $\geq 3.6$ but $< 6.0$ | $\geq 6.0$ |
| 2                                    | 225                        | 150                    | 120                    | 90                     | 60         |
| $\geq 2$ but $< 5$                   | 150                        | 120                    | 90                     | 60                     | 30         |
| $\geq 5$ but $< 10$                  | 120                        | 90                     | 60                     | 30                     | 30         |
| $\geq 10$ but $< 15$                 | 90                         | 60                     | 30                     | 30                     | 30         |
| $\geq 15$ but $< 20$                 | 60                         | 30                     | 30                     | 30                     | 30         |
| $\geq 20$ but $< 30$                 | 30                         | 30                     | 30                     | 30                     | 30         |

#### Horizontal distances

3. (1) The minimum horizontal distance specified in Table 1 may be reduced by 1 metre for every 1.5 metres of additional field length in excess of the minimum specified in Appendix 2 of Schedule 2.

(2) Notwithstanding subsection (1), a distance of at least 30 metres shall be maintained between the absorption field and the high water mark of any body of water.

#### Repair or alteration of existing systems

4. Where a sewage disposal system, constructed or installed prior to the date this schedule comes into force, is in need of repair or alteration and the repair or alteration cannot reasonably be effected in accordance with Table 1, the medical health officer or public health inspector may nonetheless issue a permit provided that, when the system is repaired or altered in accordance with the conditions contained in the permit, it will not constitute a health hazard.

**Expansion or alteration to existing systems**

5. Notwithstanding section 4 [of this schedule?], where a sewage disposal system, constructed or installed prior to the date this schedule comes into force,

- (a) is in need of expansion or alteration due to enlargement of the premises or to an increase in the number of occupants, and
- (b) the expansion or alteration cannot reasonably be effected in accordance with Table 1,

the medical health officer or public health inspector may nonetheless issue a permit provided that, when the system is expanded or altered in accordance with the conditions contained in the permit, it will comply with section 2 or 3 [of this schedule?].

**APPENDIX**

*(Schedule 4, section 1)*

Maps Showing Environmental Control Zones

[to be supplied]



OKANAGAN BASIN WATER BOARD

MINUTES OF A MEETING OF THE OKANAGAN BASIN WATER BOARD  
HELD IN THE REGIONAL DISTRICT OF NORTH OKANAGAN BOARD  
ROOM, 2903 35TH AVENUE, VERNON, B.C., ON TUESDAY, APRIL  
3RD, 1990, AT 10:00 A.M.

---

PRESENT: Director A. Hill North Okan. Reg. District  
Director M. Friesen North Okan. Reg. District  
Director J. Piazza Okan-Similkameen Reg. Dist.

ALSO PRESENT: Mr. R. A. Nickel Okan. Water Qual. Control Proj.  
Mr. T. Forty Waste Management Branch  
Mr. W. Kastelen Regional Manager, Min of Env.  
Mr. Brian Hayward Constituency Assistant  
(Lyle MacWilliam)  
Mr. Lyle MacWilliam M.P. Okanagan-Shuswap  
Mr. Bob Smith Manager, Public Health  
Protection Branch  
Mr. Mel Maxnuk Water Management Branch  
Dr. Peter Newroth Water Management Branch

STAFF: G. Armour Field Supervisor

PROCEDURE:

Since the Chairman and Vice-Chairman were not present to start the meeting, Director Hill acted as pro-tem Chairman for the Delegations portion of the agenda.

The adoption of the minutes of the February 6th meeting was dealt with later.

DELEGATIONS:

MR. SMITH Public Health Protection Branch:

Mr. Bob Smith, the Manager of the Public Health Protection Branch was asked by the Water Board to explain the Ministry of Health involvement in the drafting of the new septic tank regulations for sensitive zones in the Okanagan Valley.

Mr. Smith explained that the new standards will be restrictive in some cases to new development, and the Water Board and the public should be aware of this.

In the initial stages of development of the regulations, the Medical Health Officers had concerns about applying the new regulations to existing lots and septic systems. He estimated that about two hundred lots, yet unbuilt, could be affected. The Steering Committee agreed to remove the requirement to conform to new regulations from existing lots.

Mr. Smith also stated that it was estimated that the cost to upgrade an existing septic system to meet the new standards would be \$20,000 to \$30,000. The alternative is to connect to municipal systems.

Mr. Smith was asked by the Field Supervisor about the Water Board's question from the previous meeting concerning the adequacy of the number of Health Inspectors now available.

He replied that while there are always problems during peak periods, the main avenue of policing

construction practices is through the Building Inspectors, who are more frequently on site. A final inspection must, however, be made by the Health Inspector.

Mr. Armour referred to Mayor Shewfelt's comment from the last meeting, regarding the Ministry of Health objection to Building Inspectors doing septic tank inspections.

Mr. Smith explained that expertise and training are necessary to perform this work and this education is currently not undergone by Building Inspectors. This subject was reviewed in a report from the Ombudsmans Office.

Director Hill questioned whether Health and Building Inspectors could work more closely together to ensure that proper final inspections were carried out.

Mr. Smith replied that this is a good idea and is done in some areas of the Province.

Director Hill recommended that the building Inspector receive the final inspection from the Health Inspector, prior to issuing an occupancy permit. This comment was put in the form of a motion later in the meeting when the Chairman was present.

Moved by Director Hill and seconded by Director Reich:

"That a letter be sent to the Okanagan Valley Municipalities and Regional Districts recommending that Building Inspectors check that all permits are complete, including that for septic tanks, prior to issuing an occupancy permit."

CARRIED.

Director Friesen pointed out that most septic tank malfunctions occur through neglect and not during the initial stages. He suggested that perhaps regulations requiring easy access to the septic tank for regular maintainance should be enacted.

Mr. Smith advised that the Ombudsmans recommendations, which have been implemented, were for a clear and concise Health Policy, and for a book to be made available to homeowners on the operation and maintainance of a septic system.

He stated that septic systems can last from 5 to 25 years, and the key to longevity is in education and not legislation.

Mr. Smith also pointed out that system failure can be surface or subsurface into groundwater.

Discussion arose over the approval of drywell installations, and Mr. Forty commented that these are not usually approved.

Director Piazza asked why drywells are a problem.

Mr. Forty stated that a drywell is simply a leaching process into groundwater with little or no

nitrogen or phosphorus removal. A septic field separates components far more effectively.

Director Shewfelt entered the meeting at 10:40.

Director Friesen stated that he would like to see a regulation where septic tank installations are located by a manhole cover and the field is identified.

Moved (as a recommendation) by Director Friesen, seconded by Director Shewfelt:

"That all new septic tank installations be clearly identified for easy access by the installer."

CARRIED.

Mr. Smith noted that the new regulations will be appended to the Sewage Disposal Regulations. He added that the Ministry of Health will work with the Ministry of Environment to improve assessment of overall subdivisions, rather than individual lots. They hope to incorporate phosphorus standards into subdivision regulations, something which should be considered by municipalities, as subdivision regulations do not apply within their boundaries.

Director Shewfelt inquired about regulations affecting pump out tanks.

Mr. Smith stated that his Ministry is not in favour of these systems, even though local government approves some installations. The Ministry of Health will issue a permit if local government guarantees the safety of the system.

ARMSTRONG AND  
SPALLUMCHEEN

City of Armstrong, Township of Spallumcheen, and  
Waste Management Branch:

Mayor Hornby represented the City of Armstrong; Mayor Norris, the Township of Spallumcheen; and Mr. R. A. Nickel, Mr. T. Forty, and Mr. W. Kastelen, the Waste Management Branch.

Mayor Hornby outlined the circumstances leading to this meeting by summarizing the development of Armstrong's Waste Management Plan.

He related that in 1972, Armstrong was made aware of the high level of effluent in Deep Creek. By 1980 a system for dealing with Armstrong's effluent was proposed, which involved a spray irrigation component. Armstrong, then acquired some 200 acres of land within the Township of Spallumcheen for land disposal of treated effluent, which raised concern among some Spallumcheen residents about the possibility of groundwater contamination. Spallumcheen went to a public hearing process and suggested that Armstrong look instead at a Biological Nitrogen Removal System (B.N.R.) instead of spray irrigation. Armstrong did not feel this would meet the disposal regulations set out by the Ministry of Environment for Deep Creek, and proposed to look at boundary redefinition to facilitate the spray irrigation process. This was turned down by the Spallumcheen ratepayers.

Mayor Hornby recommended that the Waste Management Plan proceed at the original site and reminded the Board that this is not an Armstrong problem alone, but one that affects all Valley residents. He then asked Spallumcheen to cooperate in resolving the problem.

Mayor Norris said that Spallumcheen ratepayers clearly would prefer the B.N.R. system, however the original spray irrigation site purchased by Armstrong (the Hatton property) is still there, along with an additional 400 acres, zoned A-3 which permits spray irrigation of effluent.

Director Hill asked how much land is required for disposal of Armstrong effluent.

Mr. Forty informed the Board that about 300 to 500 acres is needed; a requirement which could be reduced if an outfall is present to take an excess of treated effluent in a 'bad' year.

Director Shewfelt inquired as to the total size of the Armstrong site.

Mayor Hornby stated that the original proposal included a dam and storage facility, which new engineering studies indicate may require a liner costing some \$2,000,000.

Director Hill asked if landowners had been contacted and were willing to accept the treated effluent.

Mayor Norris said that no contracts have been signed to take effluent.

Mayor Hornby observed that the conclusion must be drawn from the Spallumcheen forum, that support for the spray component of the Waste Management Plan is not forthcoming. He also noted that the disposal site is about 7.5 km from Armstrong and rights of way must be secured.

Mayor Norris stated that Spallumcheen Council has never said that the Hatton property cannot be used, although they prefer the B.N.R. system. To this end the Council created the A-3 zone consisting originally of some 3000 acres. As the project approached, some residents wanted out of this zone and Council went through hearings to again rezone parcels of land. Some properties zoned A-2 also applied for A-3 zoning but this was not allowed following protests by neighbours.

Chairman Simpson arrived at 11:10 a.m.

After a brief discussion it was decided that Director Hill would continue to chair the meeting until completion of the item before the Board.

Director Friesen inquired about the Ministry of Environment commitment to spray irrigation versus B.N.R.

Mr. Forty replied that the Ministry wishes to avoid any outfall where discharge to deep water is not practical, such as in Deep Creek. They favour land

disposal as the treated effluent should be utilized if possible, rather than disposed of in the lake.

Director Friesen asked whether the second best alternative (B.N.R.) might be better than the current stalemate where nothing is being accomplished.

Mr. Forty informed the Board that the annual operating cost of a B.N.R. plant is beyond Armstrong's capability.

Mayor Norris informed the Board a B.N.R. representative, Mr. Pat Leslie, stated that this system could put effluent in Deep Creek of higher quality than current water. He stated that soil and irrigation conditions in Spallumcheen cannot be compared with those in other areas currently using this method, such as Osoyoos.

Mr. Forty replied that Ray MacDonnell of A.R.D.A. had indicated that Spallumcheen farmers would benefit from the spray irrigation water.

Mr. W. Kastelen, the Regional Director for the Ministry of Environment in Kamloops, observed that there has been a long process involving public meetings and consideration of various options invested in the current Waste Management Plan which recommends spray irrigation as the best system for Armstrong. He would like to see the plan implemented and the water used to promote crop production.

Mr. Forty added that the Bardenpho effect on Deep Creek would be an improvement, but that the benefits of spray irrigation would be greater.

Mayor Norris informed the Board that Spallumcheen Council has called an information meeting for April 26th at 8:00 p.m. at the Centennial Hall to deal with the Armstrong waste management question. Spokesmen representing the interests of spray irrigation, B.N.R., and agriculture will be present.

Mayor Hornby asked the Ministry of Environment staff how long it would take to develop a new waste management plan if the B.N.R. process is considered; what the funding requirements would be; and if this would likely still qualify for funding under the Okanagan Water Quality Control Project.

Mr. Kastelen replied that the initial process took over one year and that there was a danger that funding could lapse in the interim.

Director Hill wished to know the cost of the original proposal as compared to the cost of the B.N.R. treatment.

Mayor Hornby advised that the Hatton property spray irrigation would involve \$6.5 million in capital costs while the B.N.R. process would require \$4.5 million. The operating costs do not differ significantly, however the possibility exists with spray irrigation, of recovering some costs through sale of water in the future.

Director Friesen asked whether savings in capital could be applied to B.N.R. operating costs.

Mr. Forty stated that this is not within the Ministry mandate. He added that the capital cost of the spray irrigation reservoir might be reduced by down-sizing and using a smaller liner.

Director Shewfelt inquired as to the cost of a flat land storage system.

Mayor Hornby replied that capital cost would be \$5.1 million, and that spray irrigation is still an integral part of this system. He then posed several questions to Mayor Norris:

-how could Spallumcheen provide right of way guarantee.

-would Armstrong have permission to talk to A-3 landowners in Spallumcheen, since this has not been done in three years.

Mayor Norris indicated that Spallumcheen ratepayers are free to discuss the matter with Armstrong and that rights of way will be accommodated where feasible, but that he foresees areas where a lack of room will make it necessary for Armstrong to deal with private landowners. He pointed out that the C.P.R.track might be useful in this regard.

Mr. Forty informed the Board that a meeting was scheduled for that evening in Armstrong, where the Ministry of Environment would make a presentation.

Director Piazza asked what the amount of phosphorus loading to Okanagan Lake from Armstrong currently was.

Mr. Forty stated that, although the volume of effluent is low, the phosphorus component is high; in fact it is the single worst municipal discharge in the Valley.

Mr. Nickel added that the objective is to reduce the level to 10 micrograms of phosphorus per liter of effluent. Even so, this is high for British Columbia, where the standard is 5 micrograms per liter. Armstrong's discharge is currently at 20 micrograms per liter.

Director Friesen left the meeting at 12:05 p.m.

Mr. Kastelen questioned whether future cooperation between Armstrong and Spallumcheen might be possible with Armstrong disposing of waste from industrial or residential development in Spallumcheen.

Mayor Hornby answered that this might be possible if such a service were required. He also indicated that a major benefit of use of spray irrigation effluent was to free existing groundwater for other uses.

Mayor Norris advised that there is no lack of water in the area but as the industrial park develops, it may require treatment facilities.

Director Piazza observed that both Armstrong and Spallumcheen should recognize their obligation to the rest of the Valley to sort out this dispute and to remove this source of nutrient pollution.

Moved by Director Shewfelt, seconded by Director Piazza:

"That the concept of spray irrigation as proposed by the Ministry of Environment in the Armstrong Waste Management Plan, be supported by the Water Board."

CARRIED.

As alternate directors on the Water Board, both Mayor Norris and Mayor Hornby were allowed by the Chair to vote. Mayor Norris opposed the motion.

Director Hill thanked all parties concerned for their input. He noted that M.P. for Okanagan-Shuswap, Lyle MacWilliam was present at the meeting and wondered whether the Board would postpone lunch recess so that Mr. MacWilliam was not delayed. There was no objection to this and Mr. MacWilliam addressed the Board.

M.P. LYLE MacWILLIAM Mr. MacWilliam stated that he had wished to attend the meeting to update the Water Board on his efforts to obtain Federal assistance for the control of aquatic weed growth.

He summarized the federal position as seeing the weed problem as a Provincial jurisdiction under water quality even though there is a Federal commitment in the Water Policy to quality of water. The Federal Minister of Environment has agreed to talk with Mr. MacWilliam in the near future.

The Water Board's recommendation on phosphorus levels in detergents was well received and the M.P. has asked the Library of Parliament to investigate the effect of such bans in other countries.

Director Piazza questioned the Federal Government involvement in the clean-up of the Great Lakes, in view of the designation of the Okanagan Valley as an environmentally sensitive area.

Chairman Simpson observed that there is a concern about water quantity as well as quality in the Valley, and recent studies have tended to focus exclusively on quality. Perhaps water quantity matters are being neglected.

Director Hill mentioned that the North Okanagan Regional District has just commissioned a study on water quantity, and the City of Vernon has just completed one.

Mr. MacWilliam agreed that there is often a lack of coordination of information gathering, and that the National Science Council has recommended to the Federal Government, establishment of regionalized institutes to assimilate water quality and disposal information. He will propose a Water Science Research Institute to the House with the Okanagan Valley as a pilot project.

Mr. Nickel informed the Board that prior to establishment of the environmentally sensitive zone, there was little cohesive effort in planning waste management strategy for the Valley. The Ministry of Environment hopes to derive a plan for sound waste management for the next 20 to 40 years from this project. As yet, water quantity matters have not been addressed.

Mr. Kastelen pointed out that implementation of the Okanagan Basin Study recommendations involved water quality, fisheries, water management, and recreation.

Chairman Simpson asked that the Board be updated on the status of implementation of these recommendations.

Mr. MacWilliam stated that it is his objective to keep the Federal Ministry of Environment aware of the problems in the Okanagan. he advised the Board that he is an alternate member of the Environmental Committee which will be hearing concerns across the country.

Moved by Director Piazza and seconded by Director Simpson:

"That the Board write to the Federal Environment Minister informing him of the great concern for water quality and quantity in the Okanagan and indicated our interest in having the Environmental Committee meet in this area to hear of these concerns."

CARRIED.

Chairman Simpson indicated that she would like to see a five year review of the implementation recommendations, perhaps in the form of an update of ongoing projects by the Ministry of Environment. This should include demographic information on the actual versus predicted growth rates.

Mr. Kastelen said that he would undertake to respond by the next meeting.

The meeting adjourned for lunch at 12:45 p.m. and re-convened at 1:55 p.m.

Dr. P. Newroth and Mr. Mel Maxnuk of the Water Management Branch joined the meeting.

Alternate Director Hornby joined the Board.

Director Reich arrived at the meeting.

The remainder of the meeting was chaired by Chairman Simpson.

Moved by Director Piazza, seconded by Director Hill:

"That the minutes of the regular meeting of the Okanagan Basin Water Board, held February 6th, be adopted as circulated."

CARRIED.



CORRESPONDENCE:MINISTER OF ENVIRONMENTFiscal Year 1990-91 Funding:

A letter from the Minister of Environment dated March 19th indicated that while the Minister has supported our funding proposals for 1990-91, no confirmation is yet available. The Minister also indicated that it is not uncommon for the final budget approved by the legislature to differ significantly from the Ministry's request.

The Chairman indicated that she has spoken to the M.L.A. who is Parliamentary Secretary to the Minister of Environment about the lengthy delay in confirming our funding level.

Dr. Newroth advised that the request is with Treasury Board and cannot be confirmed as yet.

Mr. Armour noted that Columbia Shuswap Regional District's new rototiller is now under construction and Provincial funds have been received.

Dr. Newroth confirmed that C.S.R.D. had received a "Go B.C." grant for one-third of the construction costs of the machine. He estimated that testing of this machine should occur by June, and suggested that the Water Board evaluate these tests, prior to constructing another machine.

Director Reich and Chairman Simpson both expressed their concern that funding of machinery construction was not appropriate use of lottery funds and the Board should have been informed before submitting a request. The Field Supervisor was instructed to determine the current status of the lotteries fund application.

Moved by Director Reich and seconded by Director Piazza:

"That the letter from the Minister of Environment, be received and filed."

CARRIED.

DR. J.E. BRYANSediment Sampling in Kelowna:

Dr. J. E. Bryan, of the Ministry of Environment, in reply to the Board's letter of February 9th, suggested that sampling of benthic invertebrates near the Kelowna sewage outfall might be a useful project for the Okanagan College Water Quality Technology Class, and he enclosed a copy of a letter apprising the College of this.

Director Hill inquired as to how this correspondence originated.

Chairman Simpson pointed out that the original request was for sediment sampling to take place at various point around the lake, and not just adjacent to the sewer outfall.

Moved by Director Piazza, seconded by Director Shewfelt:

"That a request be made of the Ministry of Environment for random sediment and water quality sampling of Osoyoos, Skaha, and Vaseux Lakes; and the Okanagan River, the Deep Creek outfall, and Vernon Creek, for nutrient levels and pollutants."

CARRIED.

Director Hill questioned the capabilities of the College to do the benthic invertebrate work.

Mr. Maxnuk advised the Board that this was a scientifically acceptable method which is used in determining levels of pollution.

Director Piazza and Hornby proposed that Dr. Bryan or a member of his staff be invited to the next regular Board meeting to update us on what data is available and currently being collected.

M.L.A. BARLEE

Congratulations to Board on Resolution Concerning Use of Low Phosphate Detergents:

A letter from M.L.A. Barlee of Boundary-Similkameen, congratulating the Water Board on its stand regarding the use of low phosphate detergents was received. He also stated that he would support legislation to make this mandatory.

Moved by Director Piazza, seconded by Director Reich:

"That the letter be received and filed."

CARRIED.

M.P. L. MacWILLIAM

Low Phosphate detergents:

Lyle MacWilliam, M.P. for Okanagan Shuswap also commended the Board for its recommendation concerning detergents.

Moved by Director Shewfelt, seconded by Director Piazza:

"That the Letter be received and filed."

CARRIED.

DR. KASIANCHUK

Septic Tank Inspections:

Dr. Kasianchuk, of the Water Management Branch, advised that he would forward the Board's concerns regarding follow up inspections of septic tank installations to the Ministry of Health.

Mr. Armour informed the Board that a letter from Mr. Brian Copley, Assistant Deputy Minister of Health, had been received and stated that no sewage disposal system may be used, covered, or operated prior to obtaining written authorization from the Medical Health Officer or the Public Health Inspector. Any infractions should be reported so that appropriate action can be taken.

Moved by Director Piazza and seconded by Director Reich:

"That the letters be received and filed."

CARRIED.

M.L.A.L.CHALMERS

Support for Enhanced Budget:

M.L.A. Larry Chalmers forwarded a copy of a letter sent to the Minister of Environment, supporting the Boards' request for additional funding in 1990-1991.

Moved by Director Piazza and seconded by Director Reich:

"That the letter be received and filed."

CARRIED.

RURAL RATEPAYERS OF OSOYOOS

Rural Ratepayers of Osoyoos:

The Secretary of the Rural Ratepayers Association of Osoyoos, Bonnie Thompson, forwarded a letter opposing the Town of Osoyoos decision not to allow the rural area to hook into the Town sewage collection system, unless they become part of the town.

Director Piazza said that his concern is over water quality in the entire area and by not allowing connection to the municipal system, lake water quality is detrimentally affected. He added that the Town has rescinded their refusal but wants a feasibility study to determine if the existing system is adequate.

Moved by Director Shewfelt, seconded by Alternate Director Hornby:

"That a letter be sent the Town Council of Osoyoos, with a copy to the Rural Ratepayers Association, expressing the Water Boards' concern over lake water quality and urging the Town to consider any measures available for reducing the septic tank input into the lake."

CARRIED.

UNION BOARD OF HEALTH

Approval of Renewed Water Board Focus on Water Quality:

The South Okanagan-Similkameen Union Board of Health is pleased with the renewed focus on water quality matters by the Water Board, and will forward information pertaining to water quality and sewage disposal from Union Board of Health meetings.

The Field Supervisor read two attached letters for the Boards' information; one to the Environment Minister urging protection of lakes from greywater discharge from houseboats, and a second regarding septic tank regulations.

Moved by Director Reich and seconded by Director Piazza:

"That the letters be received and filed."

CARRIED.

DR. P. NEWROTH

Innovative Industries Dredging Device:

Dr. P. Newroth forwarded a letter, to which he had replied, from Mr. L. Hackman urging the Ministry of Environment to control Milfoil by employing a dredge owned by Mr. J. Hackman of Innovative Industries, in Kelowna.

The Board was advised by the Field Supervisor, that he, Mr. Maxnuk, and Director Shewfelt had inspected the machine and advised that it does not offer cost competitive, long term aquatic weed control. Mr. J. Hackman has also indicated that he would expect to be paid for any testing.

Director Reich stated that the Board must continue to pursue all new inventions.

Moved by Director Piazza and seconded by Director Reich:

"That the letter be received and filed."

CARRIED.

DR. KASIANCHUK

Fiscal Year 1990-91 Expenditures:

Dr. Kasianchuk, Director of Water Management Branch, advised that the Board would not be permitted to receive Provincial reimbursement for expenditures over \$228,000 in F.Y. 89-90 and that over-runs into the next Fiscal Year might deplete operating funds.

The Field Supervisor informed the Board that our claims submitted to the Province for F.Y. 89-90 would not exceed \$228,000, and reviewed the Boards' decision to continue with derooting work during the mild conditions experienced this winter with the expectation that funds for our enhanced budget proposal would be approved.

Dr. Newroth advised that there may be difficulty administratively, in processing invoices dated prior to the commencement of F.Y. 90-91, in that fiscal year.

Mr. Armour commented that the Board should submit the regular claim for reimbursement in April and then deal with any problem which might arise, and the Board concurred.

Moved by Director Shewfelt, seconded by Director Reich:

"That the letter be received and filed."

CARRIED.

DR. P. HARRIS

Biological Control of Eurasian Water Milfoil:

Dr. Peter Harris of Agriculture Canada, in reply to a letter from Mr. Armour, informed the Board of some details involved in setting up a program to

research a biological control agent. He stated that Milfoil is currently not targeted for any such research program.

Moved by Director Hill , seconded by Director Piazza:

"That a copy of the letter from Dr. Harris be sent to M.P.'s Horning, MacWilliam, and Whittaker; and that the Federal Ministries of Environment, Fisheries and Oceans, and Agriculture be urged to add Eurasian water milfoil to the list of pests for which biological control agents are being researched."

CARRIED.

SEWAGE FACILITIES ASSISTANCE GRANTS;

The explanatory information regarding sewage works being funded by the Board was received and Mr. Armour pointed out that the type of response and detail submitted varied widely.

The Chairman indicated that perhaps we were not specific enough in our request and a new letter should be drafted.

Director Piazza was concerned that The District of Coldstream was apparently paid for collection systems, which are not funded under the Boards' grants, in his understanding.

The Board also asked to be updated at the next meeting, on the current status of the sewage facilities assistance fund.

Alternate Director Hornby left the meeting at 3:30 p.m.

NEW AND UNFINISHED BUSINESS:

MACHINE FUNDING

Lotteries Fund Capital Acquisition Grant:

This matter was dealt with previously in the meeting.

F.Y. 89-90 BUDGET

Fiscal Year 89-90 Cost Over-run:

This subject was also dealt with earlier in the meeting.

GEORGE FRAME

George Frame's Machine:

This matter was deferred for discussion in committee.

DR> P. HARRIS

Biological Control Information:

The Field Supervisor outlined the information received from Dr. Peter Harris of Agriculture Canada, on biological control of Milfoil. Dr. Harris forwarded 16 publications relating to insects and pathogens which attack Eurasian water milfoil. Most of these were written in the 1970's, and as yet no biological control program is in place.

DR. P. NEWROTH

Report Preparation and Documentation:

Dr. Newroth stated that the ability of the Ministry of Environment to document the work being done in the Okanagan was diminishing with staff commitments elsewhere. The area served by his field staff now takes in 16 different water bodies. He would like Mr. Armour to provide reports annually, on work done and trends in weed growth. He stated that the data is available, it is just a matter of assembling it into report form.

Director Piazza said that he was under the impression that such reports were provided by Mr. Armour, as they were presented to the Board at regular meetings.

Mr. Armour advised that he would confer with Dr. Newroth's staff and attempt to provide the necessary information.

**ADJOURNMENT:**

The Chairman suggested that the meeting move into committee for discussion of Mr. Frame's machine and the subject of staff salaries.

The regular meeting adjourned at 3:30 p.m.

  
CHAIRMAN

  
SECRETARY - TREASURER

OKANAGAN BASIN WATER BOARD

MINUTES OF A MEETING OF A COMMITTEE OF THE WHOLE, OF THE OKANAGAN BASIN WATER BOARD HELD IN THE REGIONAL DISTRICT OF NORTH OKANAGAN BOARD ROOM, 2903 35TH AVENUE, VERNON, B.C., ON TUESDAY, APRIL 3RD, 1990, AT 3;30 P.M.

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PRESENT: Chairman S. Simpson Reg. Dist. of Cent. Okan.  
Director A. Hill Reg. Dist. of North Okan.  
Director R. Shewfelt Reg. Dist. of Okan-Simil.  
Director J. Piazza Reg. Dist. of Okan-Simil.  
Director E. Reich Reg. Dist. of North Okan.

ALSO PRESENT: Mr.M. Maxnuk Water Management Branch  
Dr. Peter Newroth Water Management Branch

STAFF: G. Armour Field Supervisor

OTHER MATTERS:

George Frame's Machine:

Mr. Armour described a proposal made by Mr. George Frame, an independent contractor, to use an amphibious piece of equipment towing an agricultural cultivator to control Eurasian water milfoil on the Kelowna foreshore. The attached report forms the substance of the proposal and describes the successful testing undergone by Mr. Frame's machine.

Moved by Director Reich and seconded by Director Shewfelt:

"That we have a 1990 pilot contract as outlined in the proposal with Mr. George Frame, since this is equipment we are already using ourselves and our own machine (the Bombardier) has not proven serviceable."

CARRIED.

Dr. Newroth commented that he is in favor of the small contract to further evaluate this new option, but he is also concerned over the "flak" that may be generated by other inventors.

The Board also decided to continue to operate our own rototilling equipment concurrently with this project.

Staff Salaries:

Moved by Director Reich, seconded by Director Shewfelt:

"That the staff salary increases as set out in the attached memorandum , including the benefit package, be approved.

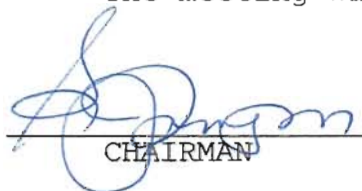
CARRIED.

Next Meeting:

The Chairman suggested that the next regular meeting be held on May 29th in Kelowna. The Board agreed.

**ADJOURMENT:**

The meeting was adjourned at 4:00 p.m.

  
CHAIRMAN

  
SECRETARY - TREASURER

PM/gda  
Attach.



OKANAGAN BASIN WATER BOARD

MEMORANDUM  
\*\*\*\*\*

To: Okanagan Basin Water Board Directors  
From: P. Mackiewich, Administrator  
Date: March 27th, 1990  
Re: Staff Wages and Benefits

1. WAGES

Operations Staff

A 5% increase is recommended for equipment operations staff. This increase, combined with the benefit package recommended below, would give a total increase of approximately 10%.

| <u>Category:</u>                    | <u>O.B.W.B.<br/>Rate/Hr.</u> |            | <u>Average Kelowna/<br/>Vernon/Pent./Hr.</u> | <u>C.S.R.D.</u> |
|-------------------------------------|------------------------------|------------|--|-----------------|
|                                     | <u>Current</u>               | <u>+5%</u> |  |                 |
| Truck Driver/Machine Op.<br>(E.O.3) | \$13.89                      | \$14.58    | \$ 15.75                                     | \$ 14.47        |
| Machine Op. (E.O.2)                 | \$13.33                      | \$14.00    | \$ 15.43                                     | \$ 13.96        |
| Machine Op. (E.O.1)                 | \$10.63                      | \$11.16    | \$ 14.77                                     | N/A             |

C.S.R.D. staff receive 14% additional pay in lieu of benefits and holiday pay.

Municipal staff receive a full benefit package.

Field Supervisor

A significant salary adjustment was granted last year to bring this salary in line with a Ministry of Environment Biologist 2 with equivalent experience. Ministry of Environment biologists will receive a 5% increase effective in 1990/901.

Current salary \$40,800 per annum + 5% = \$42,840.

2. BENEFITS:

Field Operations staff who are working close to year round will likely have to contribute to Superannuation, as their employment is no longer considered seasonal.

It is **recommended** that a benefit package be given to those staff who are working full-time. This would be similar to the benefits received by the Field Supervisor.

Total cost to the Water Board of benefits would be approximately 5% of wages.

OKANAGAN BASIN WATER BOARD

MEMORANDUM

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To: P. Mackiewich, Administrator

From: G. Armour, Field Supervisor

Date: May 3rd, 1990

Re: Evaluation of Aquatic Plant Control Ltd.  
machine (Mr. George Frame)

Background

George Frame is a Summerland resident who contacted the Water Management Branch in September of 1989 regarding the potential for use of a World War 2 Army "Duck" in aquatic weed control. Mel Maxnuk and I, examined the machine on September 7th at Summerland and it seemed to be well constructed and maintained. Discussion centered around the type of implement which could be used to remove aquatic weeds with this machine. The attached memos describe subsequent observations and evaluation of this device.

ap



To: P.R. Newroth

Date: Dec. 15/89

Subject: GEORGE FRAME AMPHIBIOUS MACHINE

On Wednesday, December 13, 1989 Greg Armour and myself were offered a demonstration of George Frame's amphibious machine.

In a telephone conversation with myself on Dec. 1/89, Frame reported that he had mounted an eight foot wide agricultural cultivator behind his vessel (copy of memo attached). As promised, Frame telephoned me on Dec. 11/89 and reported that initial testing of the machine in the Summerland area had been successful. He reported that the machine was able to pull the implement through the substrate with little difficulty. He reported seeing aquatic plant root and stem tissue floating on the surface in the wake of the implement's path.

Buoyed by these favorable results, Frame asked to demonstrate the machine to us. We requested he perform the demonstration along the Kelowna Foreshore, as this is the largest derooting site in the Valley, and for a machine to be successful it must at least be able to perform under the conditions found in this area.

Unfortunately, the machine did not perform as Frame experienced in his Summerland tests. Despite repeated attempts, he was unable to pull the cultivator through the substrate while under propellor power only, wheel power only, or a combination of both. Under full forward speed Frame would engage the implement in the lake bottom which caused the machine to gradually slow down until it came to a full stop. Under wheel power only, the six driving wheels lacked sufficient traction to pull the cultivator through the lake bottom. The underlying substrate in the Kelowna Foreshore area is a black clayey sand which evidently offers much greater resistance to an implement than the substrate in the Summerland area.

Frame thinks the problem may be related to adjustment. He is going to experiment with the depth and angle of cut to see if he can duplicate the Summerland results. He believes he can solve the traction problem by replacing the rear four wheels with a set of tracks.

cc: Greg Armour ✓



M.D. Maxnuk



Province of  
British Columbia

# MEMORANDUM

TO:

P.R. Newroth

FROM:

M.D. Maxnuk

SUBJECT:

Geo. Frame Amphibious Machine

DATE:

Dec. 1, 1989

FILE:

- |   |   |   |   |   |
|---|---|---|---|---|
| <input type="checkbox"/> For Your Information | <input type="checkbox"/> Please O.K. and Return   | <input type="checkbox"/> Please Discuss With Me | <input type="checkbox"/> Per Your Request | <input type="checkbox"/> For Your Signature |
| <input type="checkbox"/> Please Process       | <input type="checkbox"/> Return With More Details | <input type="checkbox"/> Investigate and Report | <input type="checkbox"/> Please Answer    | <input type="checkbox"/> For Your File      |

On Dec, 1/89 I received a phone call from Mr. G. Frame, owner of the W.W. 2 surplus amphibious "DUCK". He has now mounted a cultivator on the back of the machine and is itching to try it out for milfoil control. He is going to do some water testing this week in the Summerland area, then call me on Dec. 11/89 to let me know how he made out. This cultivator is eight feet wide, expandable to ~~ten~~ twelve feet wide and supposedly can be used in up to eighteen feet of water depth. I am most interested if the vessel can tow the implement along the lake bottom (actually under the bottom

REPLY:

sediment at least four inches deep) while being powered only by the prop - without the wheels contacting the lake bed. I told Frame to check with Ministry in Penticton and tell them what he is going to be doing in the Summerland area this week. He said he would.

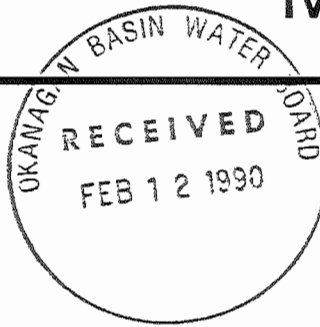
CAPITAL BUSINESS FORMS LIMITED

REMOVE THIS SHEET AND FORWARD BALANCE OF SET



To:

P.R. NEWROTH



Date:

FEBRUARY 8, 1990  
FILE: LRU 64.101510

SUBJECT: GEORGE FRAME'S AMPHIBIOUS MACHINE

On Wednesday, February 7, 1990 Ian Horner and myself viewed George Frame's amphibious WW 2-surplus vessel. Greg Armour was supposed to come along, however a last minute personal appointment prevented his attendance.

Some months ago Frame sought to increase the number of potential uses for his machine by modifying it for aquatic plant control. He attached a standard agricultural type cultivator, similar to the one on the Bombardier, but supported on much longer arms to permit operation in up to fifteen feet water depth. Frame demonstrated this first version to Greg and myself on December 13, 1989. At that time we observed the machine lacked sufficient power and/or traction to pull the cultivator through the lake substrate in a continuous forward motion at the necessary speed to achieve proper root removal.

Since that time, Frame has replaced the original gasoline engine with a much more powerful V-6 Cummins diesel engine. He spent approximately \$20,000 on the conversion which also included repairing the brakes and wheel bearings.

The increase in power appears to have done the trick, as the machine now easily pulls the cultivator through the substrate. The demonstration site was located in front of Rotary Park approximately 300 yards north of the Cook Street boat launch. This is a typical Kelowna Foreshore site, consisting of a wide shallow shelf gently sloping to an abrupt drop-off. The bottom consists of firmly-packed sandy-silt, becoming less firmly packed with increasing water depth. Ian claims this would not be an easy site to rototill because of the compacted bottom.

Frame was able to tow the cultivator through this substrate under all conditions requested. Initially, he approached the drop-off with the cultivator lowered but with the water too deep to make contact. When the implement contacted the bottom at the drop-off there was a noticeable slowing in the machine's forward progress and the cable supporting the cultivator went slack. Under only prop power without the wheels touching the lake bottom, forward progress was easily sufficient for the cultivator uplift and agitate the root masses. As the water depth decreased, the wheels could be felt as they touched the lake bottom, at which time Frame

would disengage the propellor and proceed under wheel power only. Again, the forward speed of the machine under only wheel power was clearly sufficient for effective cultivating.

Although the water was very rough on this day, one could see a large amount of dislodged root material spontaneously float to the surface in the wake of the machine. Close examination of a few of the root masses revealed that the black root fibres had been sheared off approximately 2 inches below the root crowns. Frame could easily follow a straight line in shallow water under wheel power only. Because the water was so rough, it was not possible to assess tracking and guidance in deep water under prop power only. The three-blade propeller is about 20 inches in diameter, which creates a tremendous wash right in the vicinity of the cultivator. This may have the beneficial effect, particularly in shallow water, of washing sediment from the root crowns.

Based on what we saw that day, both Ian and myself agree that the machine shows promise and is worthy of further consideration as an aquatic plant control method. Some elements of this thing which need to be evaluated further include:

1. Wheel traction in softer substrate (although Frame claims he has a set of tracks on order which he claims can be easily mounted and which should solve any traction problems).

2. The durability of a 45-year old vessel under continuous operation.

3. The durability of the arms which support the implement. The present ones seem to be under-designed for long term operation.

4. The ability to track in deeper water where the operator is using only propeller power.

5. The ability to tow a wider implement than the 8-foot wide cultivator used in this demonstration. The machine should at least be able to tow a 10 foot wide cultivator.

Greg and myself agree that the Frame machine shows promise as a replacement for the Bombardier. We also agree that Frame should be required to perform an unpaid test to validate performance before being considered as an operational contractor.

cc: Greg Armour

M.D. Maxnuk



To: Mel Maxnuk  
Head, Vernon Sub-unit  
LRU/WMB/Environment

Date: 28 March 1990

Re: Preliminary Assessment of Le Duck

On 27 March 1990, Greg Armour, Ian Horner, Dale Haberstock and I met Mr. George Frame and his staff to assess whether Mr. Frame's amphibious vehicle pulling a cultivator was suitable for aquatic weed removal. Until now, the OBWB have used a cultivator pulled by a Bombardier tracked muskeg skidder to uproot *Myriophyllum spicatum* plants at de-watered sites and in very shallow areas. Mr. Frame is confident that his amphibious vehicle, a refurbished WWII-vintage landing craft named "Le Duck", can achieve similar results in very shallow water as well as in deeper water.

The location and dimensions of the assessment site are provided on the attached figure. Before any work was done, I SCUBA dove the entire area both inside and outside the marked plot and observed the following.

There was dense *M. spicatum* (>90 % cover) throughout most of the test plot. Density was greatest along the deep-water edge of the plot, and least along the shallow-water edge. The deep-water edge marked an abrupt change in aquatic plant growth. Dense growth occurred along this edge and inside the plot, but there was sparse growth for 6.0 to 7.0m offshore. Density increased at the drop-off where there was a 6.0 to 7.0m wide band of dense plant growth dominated by *M. spicatum*, but with *Elodea* sp. and several *Potamogeton* spp. well-represented. The shallow-water edge and areas further in-shore supported sparse aquatic plant growth. Except for the deep-water edge, plant density and community composition were uniform inside and outside the edges of the test plot - therefore, Mr. Frame was instructed not to treat beyond the plot boundaries so that the areas outside the plot could serve as

examples of pre-treatment conditions. Before proceeding with the test, I counted the root crowns from within two 0.25m<sup>2</sup> quadrants randomly tossed from the boat into the test plot. There were nine root crowns in one and twelve in the other.

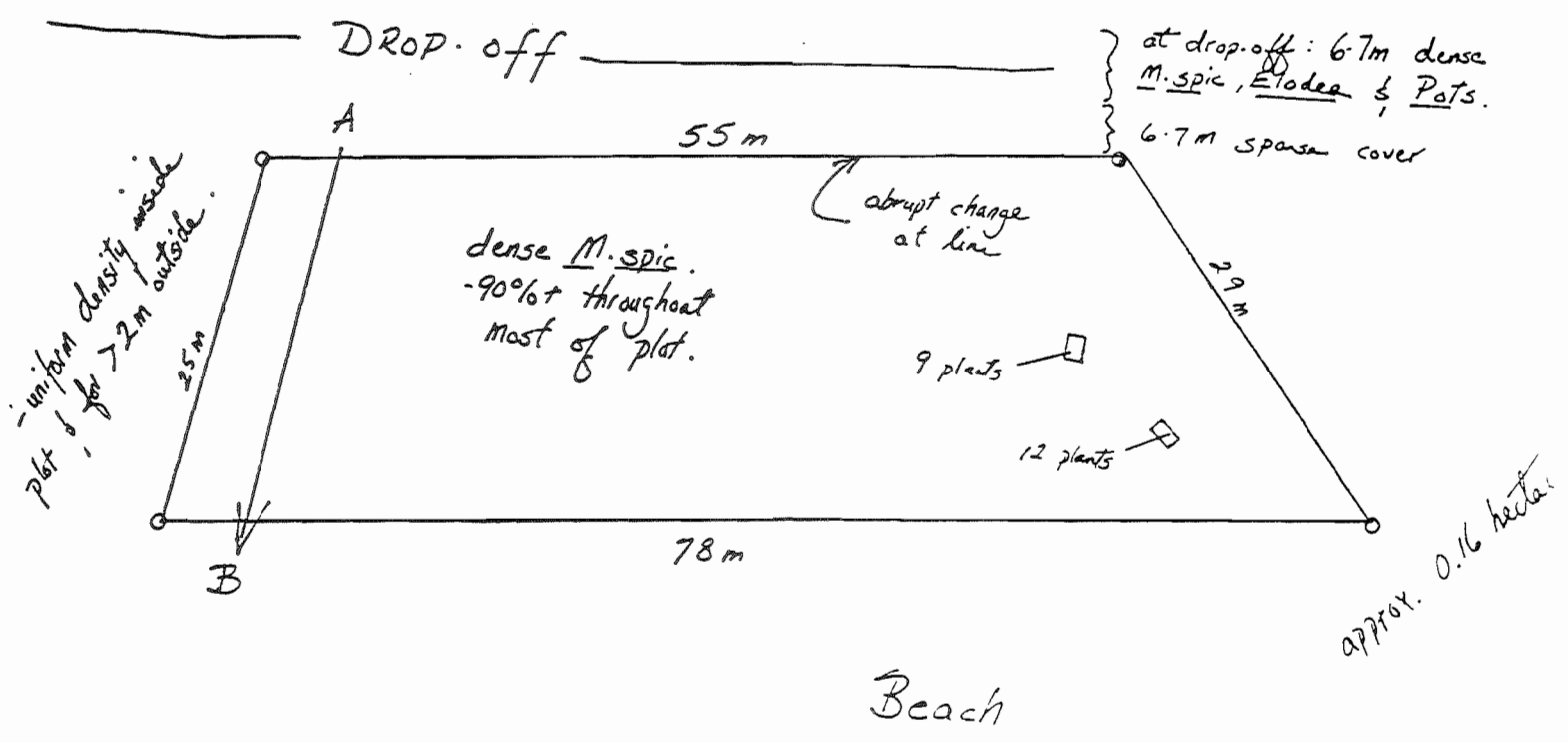
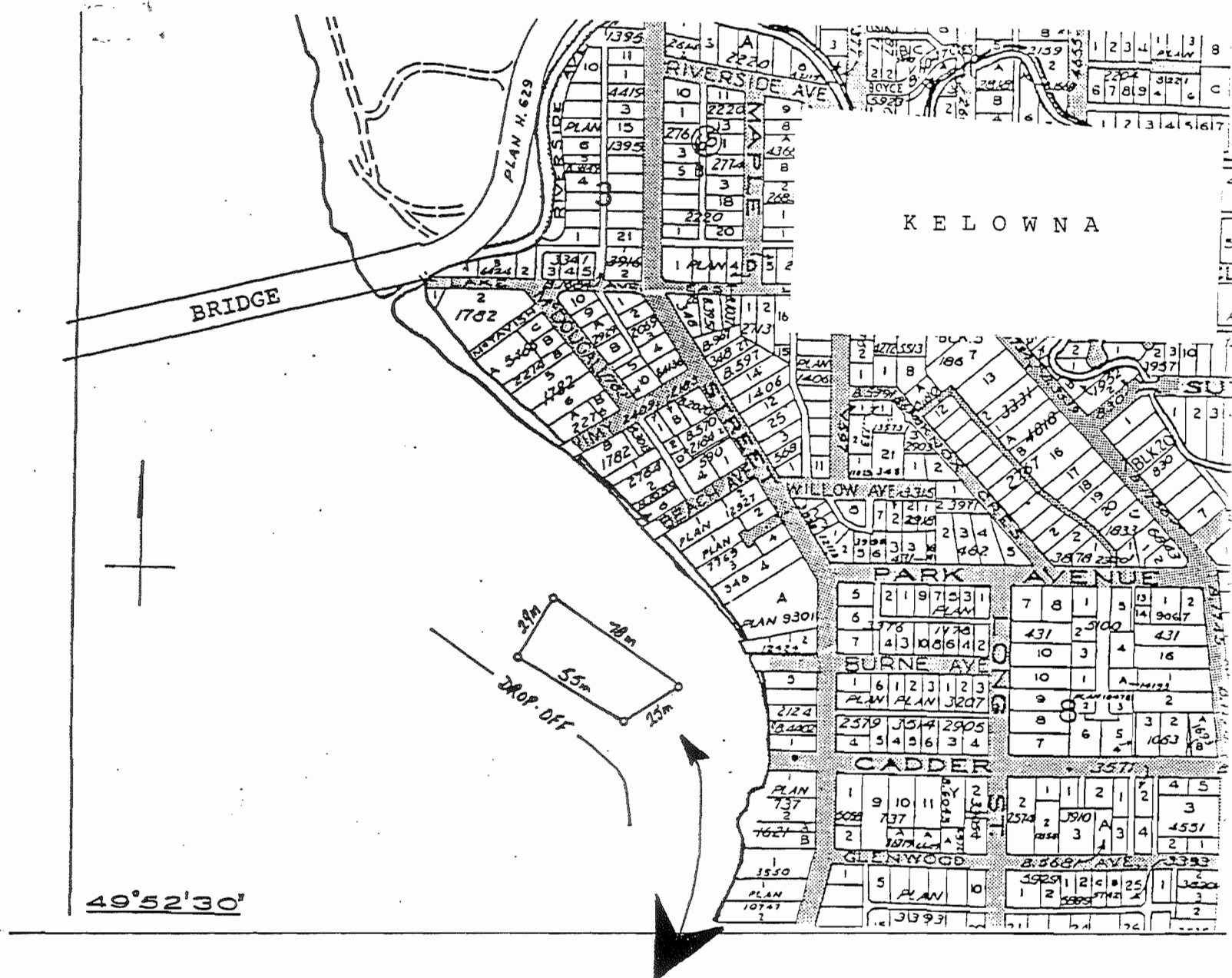
Mr. Frame then made one pass through the plot as indicated by Line A -> B. This pass was between 35 and 40 metres long, beginning outside the plot in deep water and continuing into the shallows. G. Armour timed the pass at 32 seconds. We assessed the pass from the surface and estimated that Le Duck had achieved 40 to 50% plant removal in the deeper half of the pass, but less than 25% removal in the shallower half. This might have been better if he had travelled slower.

G. Armour asked Mr. Frame to complete treatment of the plot plus as far as the drop-off on the deep-water side; but, reminded him not to treat outside the plot boundaries along the two short sides. Following lunch, we returned to observe the treatment and found that the cultivator had become stuck. We helped free the cultivator then left the area for about 1/2 an hour. When we returned, Le Duck was working well and obviously removing large amounts of plant material, however, one of the cultivator wheels had come off and was floating on the surface. Mr. Frame went ashore to repair the wheel and we left. We did no further assessment as underwater visibility was very poor due to stirred sediments.

Brian Retzer, RPBio.  
LRU/WMB, Vernon

✓ cc. G. Armour, OBWB





OKANAGAN BASIN WATER BOARD

MEMORANDUM

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To: P. Mackiewich, Administrator

From: G. Armour, Field Supervisor

Date: May 2nd, 1990

Re: Post treatment assessment of George Frame  
Test Area.

On March 29th, 1990, Dale Haberstock, Ian Horner, and I, examined the test block completed by George Frame's amphibious cultivator. D. Haberstock dove the site, with conditions relatively windy, but visibility good. A surface examination of the plot did not reveal any significant plant growth remaining in the 0.16 ha site, except near boundary markers and at one point on the south edge where an engine block was present.

D. Haberstock examined the sediment within two randomly thrown 0.25 m<sup>2</sup> quadrants and found no viable plant material in one, and one piece of root (viable) in the second. He then swam the remainder of the plot, examining the subsoil at random. It is estimated that the removal rate was 90% plus with the exception of the boundary marker areas and engine block obstacle, noted previously.

Mr. Frame reported that three passes were made over the plot in a total operating time of approximately 3 hours.

Removal percentage compares very favorably with current Water Board de-rooting methods (Bombardier and Rototiller), and the apparent rate of operation is faster. Durability of equipment was not assessed as part of this test.

I informed Mr. Frame that he should make a proposal for presentation to the Okanagan Basin Water Board and he agreed to meet with me next day to discuss this. Following, is a description of the proposal I received from Mr. Frame on March 30th, and outlined to a meeting of the Committee of the Whole of the Okanagan Basin Water Board on April 3rd.

Mr. Frame proposes to offer his services as a contractor under the name "Aquatic Plant Control Ltd." Specifically he proposes to de-root the Kelowna Foreshore area normally done by the Water Board rototiller and Bombardier. This would be done in three blocks with work assessed following completion of each block and able to be terminated by either party.

Block #1 : Bridge to Strathcona Avenue  
Approximate area 6.04 ha  
Price : \$6000.

Block #2 : Kinsmen Park to Cedar Ave  
Approximate area : 24.55 ha  
Price : \$13,920.

Block #3 : Brown's Point to Gyro Beach  
Approximate area : 3.27 ha  
Price : \$4080.

The total cost for de-rooting of all three blocks would be \$24,000. During the past two seasons, Water Board equipment has averaged about 400 hours of operation in these sites. Our average cost per hour of operation is \$65 per hour for a total cost of \$26,000. This does not include supervisory or administrative costs which would be incurred with a contractor as well.

ap  
attach.

OKANAGAN BASIN WATER BOARD

MINUTES OF A MEETING OF THE OKANAGAN BASIN WATER BOARD  
HELD IN THE REGIONAL DISTRICT OF CENTRAL OKANAGAN BOARD  
ROOM, 540 GROVES AVENUE, KELOWNA, B.C., ON TUESDAY, MAY  
29TH, 1990, AT 10:00 A.M..

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PRESENT: Chairman S. Simpson Cent. Okan. Reg. Dist.  
Alt. Director E. Hornby North Okan. Reg. Dist.  
Director M. Friesen North Okan. Reg. Dist.  
Director A. Hill North Okan. Reg. Dist.  
Director D. Whittaker Okan.-Similk. Reg. Dist.  
Director J. Piazza Okan.-Similk. Reg. Dist.  
Director R. Shewfelt Okan.-Similk. Reg. Dist.

ALSO PRESENT: Mr. M. Maxnuk Water Management Branch

STAFF: P. Mackiewich Administrator  
G. Armour Field Supervisor

MINUTES:

Moved by Director Shewfelt and seconded by Director Friesen:

"That the minutes of a regular meeting of the Okanagan Basin Water Board held on April 3rd, 1990, be adopted as circulated."

CARRIED.

Moved by Director Shewfelt, seconded by Director Whittaker:

"That the minutes of the Committee meeting of the Okanagan Basin Water Board held on April 3rd, 1990 be adopted as circulated."

CARRIED.

DELEGATIONS:

DR. J. E. BRYAN

Water Quality Sampling in Okanagan Valley:

Dr. J. E. Bryan, of the Ministry of Environment Regional Office in Penticton, described the current regime of water quality sampling conducted by the Ministry in lakes in the Okanagan Valley.

He outlined sample site data in Kalamalka, Wood and Okanagan Lakes, with some mention of data collected in Skaha and Csoyoo Lakes.

Sites are sampled twice yearly; once in the spring when the water is not stratified (February, March, or April), and a second time in the fall, usually in September. The spring information is most indicative of the nutrient levels that will be available in the summer growth period.

Concentrations of nutrients (mainly phosphorus and nitrogen), heavy metals, phytoplankton, and zooplankton, are examined. Work on temperature profiles and oxygen levels is also done.

The Chairman asked Dr. Bryan what these parameters indicate.

Dr. Bryan indicated that lakes are categorized as eutrophic, mesotrophic, or oligotrophic.

/ . . . 2

These terms indicated the level of productivity of the lake; for example a eutrophic lake such as Wood Lake would contain a lot of phytoplankton and zooplankton; Skaha Lake would be a mesotrophic Lake, an Okanagan Lake would vary from mesotrophic to oligotrophic.

The level of phosphorus gives a good indication of the nutrient, or trophic condition of a lake when measured in the spring. Dr. Bryan pointed out that there has been a decrease in the phosphorus level in Wood Lake from 1970 to 1989, while in Osoyoos Lake, the level has increased.

Alternate Director Hornby asked the significance of spring versus fall phosphorus sampling.

Dr. Bryan stated that levels are usually maximum in the spring, and decline throughout the growing season as nutrient is taken up by algae. These plants sink to the lake bottom, but in shallow water, may decompose and recycle the nutrients.

Director Friesen asked whether the drop in Wood Lake phosphorus level was due to changes in industrial practices.

Dr. Bryan replied that the addition of Hiram Walker Distillery cooling water to Wood Lake has resulted in a reduction in the flushing time from 30 years to 14 years and this is indeed a factor in the quality change.

Director Piazza wished to know the reason for the increase in nutrient levels in Osoyoos Lake, when sewage treatment has been upgraded throughout the Valley in recent years.

Dr. Bryan indicated that there are some different characteristics in Osoyoos Lake which affect water quality. Milfoil is one of these factors. He stated that phosphorus is a limiting factor in the growth of phytoplankton and zooplankton, thus it is important to control the input of this element through proper waste management practices. Nitrogen limitations occur in some cases, but most trophic production is phosphorus controlled. In addition to Osoyoos Lake, some areas of Okanagan Lake are sensitive.

Dr. Bryan discussed changes and trends occurring in various areas of the Valley. Okanagan Lake at Vernon has lower spring phosphorus levels following the diversion of effluent to spray irrigation. The Armstrong Arm is generally high in phosphorus due to wastewater and agricultural sources, while the remainder of the lake has shown no major upward or downward trend in the past 20 years.

The Chairman asked whether the level in the Armstrong Arm will drop when the Waste Management Plan becomes effective.

Dr. Bryan replied that in mesotrophic conditions, the results of such changes are not immediately apparent. Okanagan Lake at Kelowna showed a significant phosphorus level drop after the installation of the Bardenpho treatment plant while fewer changes occurred at other sites.

Spring nitrogen levels also dropped at Vernon and Kelowna following improvements to wastewater discharges

Alternate Director Hornby questioned the purpose of testing if point source problems are not identified.

Dr. Bryan stated that this type of testing is also done but not as an indicator of the overall condition of the lakes.

The Chairman wished to know the major source of nitrogen input into the lakes.

Dr. Bryan answered that it is a combination of wastewater, diffuse sources, and atmospheric nitrogen converted by some types of plants.

The Chairman asked whether high phosphorus levels in some areas could be linked to forestry practices.

Dr. Bryan confirmed this and stated that this is being addressed by the Okanagan Water Quality Control Project. Other trends at deep sample sites include a lowering of pH as the lakes become more acidic over the years. Levels of salts such as calcium and sodium have also risen in most lakes.

Director Hill wondered if the large amounts of road salts used in the winter contribute to this.

Dr. Bryan agreed but said that erosion is a major factor as well.

In Kalamalka Lake there has been a fluctuation in spring phosphorus levels, with a general upward trend. Many people feel that there has been a change in the character of water in Kalamalka Lake in recent years and Dr. Bryan shares the concern that high phosphorus levels of the early 1980's may return, despite lesser levels the past few years.

Director Friesen asked if this could be climate related.

Dr. Bryan said that wet years may cause an influx of high phosphorus Wood Lake waters but that the only definite conclusion is that water quality in Wood Lake has improved with increased flushing. The higher nutrient levels in Kalamalka Lake may be a result, and it could be that both lakes may eventually end up in a mesotrophic state.

The Chairman questioned the effect of leaching of nutrient from spray irrigation on the Commonage area.

Dr. Bryan informed the Board that more seepage occurs into Okanagan Lake, but some end up in Kalamalka Lake as well.

In summary, the water quality in the Okanagan Valley Lakes is good as compared to other systems in North America, but there are some disturbing negative changes. Where nutrient removal has occurred the quality of the water has improved, but

in general, the quality is deteriorating at a slow rate. Observations made in the 1940's show changes comparable to other North American lakes. In Kalamalka Lake the water quality remains good but is threatened. There is increased phytoplankton growth and a greater abundance of attached algae. Reasons include the flushing of higher nutrient water from Wood Lake due to the Hiram Walker input, the input from diffuse sources, and the new highway construction which also changed phosphorus input.

Dr. Bryan believes the major affect on Kalamalka Lake water quality, which is just now becoming apparent, is the Oyama Canal which was dug in the 1920's. The soil which acted as a barrier to phytoplankton movement and as a filter to nutrients was removed, and the two lakes may now be reaching an equilibrium.

The Chairman asked which areas need attention to halt or slow this deterioration, perhaps by actions like the new septic tank regulations.

Dr. Bryan stated that most of the large sources of nutrient have been addressed as these are the easiest, but numerous small things need attention. Phosphorus has a direct effect on water quality but other substances matter and it must be remembered that all substances introduced by development end up in the surface water. Economics must be kept in mind as to who benefits from control measures. The politicians must decide how far to go to achieve a workable level of control that is affordable to the taxpayer.

Director Piazza disagreed with the long term outlook as presented, and felt that there should be a general increase in quality of water, not the reverse.

The Chairman stated that perhaps it is the role of the Water Board to let the public know.

Director Shewfelt agreed that the message is to use this information to lobby for higher quality water.

Director Friesen objected to septic tanks being singled out as a major detriment to the lakes, when far more detrimental systems are present.

Dr. Bryan informed the Board that much more phosphorus is contributed to the lakes from septic tanks than from outfalls now, the reverse of the situation in 1970.

Director Hill questioned the ability to isolate the septic tank component from erosion and other factors. He stated that septic tanks are being used as a scapegoat.

Director Whittaker wondered what the drinking water quality in our lakes will be like by the year 2000. She observed that as water quantity declines we will look more to the lakes as a source of drinking water.

Dr. Bryan commented that it is likely that we will have plants in the future to treat our drinking water with much more extensive processes than chlorination. This is now very common in other parts of the world using such things as filtering and coagulation for removal of algae and pathogens.

Director Piazza questioned the number of sample sites mentioned by Dr. Bryan in Osoyoos Lake.

Dr. Bryan informed the Board that Mr. Phil Epp of the Okanagan Water Quality Program had conducted a one-time shoreline survey but this is not part of the Ministry's regular program.

The Chairman thanked Dr. Bryan for his presentation of this valuable information to the Board.

MR. E. JACKSON

Vernon and District Water Conservation Committee:

Members of the Vernon and District Water Conservation Committee included Margaret Martins, Kay Bartholomew, John Baumbrough, Eric Jackson, and Ron Beliveau.

Mr Jackson made a presentation concerning the need to address the water shortage which faces us in the future right now. The Okanagan has been identified as a potentially water short area and we must begin to make more efficient use of existing supplies, according to Mr. Jackson. Our water use in Canada doubled in the 1970's, while our population increased by only 5%.

Mr Jackson outlined two methods by which efficient use of water may be achieved:

- Supply Management
- Demand Management

Supply Management may involve such measures as metering, leak detection and repair, pressure reduction, watershed management, and evaporation suppression.

Demand management involves pricing structures, regulations, and public education, which cause the user to conserve water.

Mr. Jackson stated that the Vernon and District Water Conservation Committee was formed 8 years ago when problems with the volumes of wastewater accumulating in the Vernon storage reservoir were experienced. The Committee is funded by the City of Vernon, District of Coldstream, and the Vernon Irrigation District. Past and On-going projects include: Sand filled containers to displace water in toilet tanks

- Conversion of public auto-flush urinals to work only when lights are on
- A booklet entitled "Vernon and District Water System" for school education
- Collection of educational literature from other areas.
- Media conservation tips
- Elementary school educational visits
- School poster and essay contests



Conservation stickers distributed at schools

Various conservation recommendations made to City Council.

Mr. Jackson gave some examples of conservation techniques proposed for use in the United States:

Regulations for all toilets to use a maximum of 1.6 U.S. gallons per flush as compared to 5 to 7 Imperial gallons per flush in Canada.

Limits to the amount of landscaping permitted on residential land.

He informed the Board that the largest ever conference on water conservation is to take place in Phoenix Arizona, August 12th to 16th.

Director Friesen asked for Mr. Jackson's comments regarding the City of Vernon's refusal to participate in formation of a single local water authority

Mr. Jackson observed that the City wants to see the results of the restructuring study for the area prior to making a decision on the water authority matter.

MR J. BAUMBROUGH

Mr. John Baumbrough of the Water Conservation Committee gives presentations dealing with water at the school level and also to adult groups, communities, and service clubs.

The focus of his presentation at the school was demonstrated briefly for the Board and included:

- The importance of water
- Uses of water
- Demand for water in production of various foodstuffs
- Recycling of water around the home
- Conservation of water at home.

The Chairman thanked Mr Baumbrough and Mr. Jackson for their informative presentations, and asked Mr Beliveau if he saw a role for the Water Board in delivering the message of water conservation.

Mr. Beliveau said that he hoped the Board could direct the Committee to appropriate groups to hear their presentation.

The meeting adjourned for lunch at 12:25 p.m. and reconvened at 1:30 p.m.

Director Friesen was absent when the meeting commenced.

Director Whittaker suggested that a letter be sent to all Mayors and Councils describing the activities of the Vernon and District Water Conservation Committee and re-affirming the Water Board endorsement of this work.

Alternate Director Hornby agreed and stated that this type of effort should be initiated in other communities.

The Chairman suggested that we should use the expertise of the Vernon group to interest other communities and generate support for conservation measures.

Moved by Director Piazza and seconded by Director Whittaker:

"That the Water Board re-affirm its support of the efforts of the Vernon and District Water Conservation Committee in a letter to Municipalities and Regional Districts. The letter should also include an outline of activities from the Vernon Group, their contact person, and the cost of making presentations to other groups."

CARRIED.

CHAIRMAN SIMPSON

Canadian Water Resources Conference:

The Chairman informed the Board that she had addressed the Canadian Water Resources Association Conference two weeks ago. She has also been invited to participate in the Provincial Environment Round Table Discussion.

Chairman Simpson indicated that the Environment Ministry has funds available for biological control work and suggested that there should be a letter asking that money be directed toward milfoil control in the Okanagan Valley.

The Chairman asked whether the Water Board wished to lobby for implementation of the recommendations of the Okanagan Basin Implementation Study which have not yet been acted upon.

Director Friesen returned to the meeting at 1:50 p.m.

Director Whittaker stated that the Board has gathered a significant amount of information and is now in a position to act on some of these issues.

The Administrator suggested that there is currently a lack of coordinated water management strategy in the Valley, with areas undertaking studies and implementing programs without knowledge of these actions in other jurisdictions.

The Chairman proposed that the Board review the recommendations of the Implementation Study and address those which have not been implemented and develop an action plan. A tentative date for the next regular meeting was set for 10:00 a.m. July 31st, in Penticton.

CORRESPONDENCE:

HON. LYALL HANSON

A press release, jointly issued by the Minister of Environment and the M.L.A. for Okanagan North, Lyall Hanson was received. The release stated that the Provincial government would commit \$730,000 to develop and build new milfoil equipment.

The Administrator noted that a letter had been sent to the Minister thanking him for this announcement and asking for clarification of the exact allocation of funds. No reply has been received.

Mr. Maxnuk advised the Board that while the total of \$730,000 matched the enhanced budget request for 1990-91, his Branch had received no additional confirmation. He also noted that for work proposed under the enhanced program, such as biological control, it is already almost too late in the season. In response to a question from the Chairman, Mr. Maxnuk noted that biocontrol work would likely focus on insect larval species feeding on milfoil and that Grass Carp was not suited to milfoil control in large lake systems. Importation of the fish is still prohibited by both Provincial and Federal Fisheries.

Mr Maxnuk informed the Board that construction of Columbia Shuswap Regional District's new rototiller is proceeding and that engineering data might be available to the Water Board.

The Administrator was instructed to draft a letter in urgent terms, to the Minister stating the need for confirmation and breakdown of the extra funding so that work may proceed.

DR. KASIANCHUK

Fiscal Year 1989-90 Expenditures:

A letter was received from the Director of Water Management Branch stating that the funds spent in February and March of 1990, which the Board had hoped to claim from the Fiscal Year 1990-91 budget, could not be reimbursed by the Province.

Mr Armour advised that this would amount to approximately \$16,000.

The Board proposed to send a letter to the Water Management Branch describing past practices in putting through expenses, and in addition to contact our political representatives to assist with this problem.

NEWSPAPER REPORT

"Province" Newspaper Report Describing Okanagan Pollution:

A copy of a "Province" newspaper report was forwarded by Mayor Radi of Osoyoos. The report contained several inaccuracies regarding the state of water quality in the Okanagan.

The Board expressed concern over the errors but decided to receive and file the correspondence.

M.P. L. MacWILLIAM

House Standing Committee on the Environment:

A copy of a letter from the M.P. for Okanagan-Shuswap to the Federal Environment Minister was received. The letter supported the Water Board's request that this committee meet in the Okanagan to hear of our concerns first hand.

R.D.C.O./R.D.O.S.

Septic Tank Inspections:

Letters from the Regional Districts of Central Okanagan and Okanagan-Similkameen confirming action on the Board's request for septic tank inspections and identification were received.

ARMSTRONG/ SPALL.

Armstrong-Spallumcheen Community Awareness Committee:

Correspondence was received from Mr. Grahame Bain, Chairman of the Armstrong-Spallumcheen Community Awareness Committee, suggesting that the Water Board support study of pollutants in Deep Creek and potential benefit of diversion of Fortune Creek waters into Deep Creek.

Alternate Director Hornby agreed that there was value in the study of Deep Creek effluent.

Moved By Alternate Director Hornby and seconded by Director Friesen:

"That the Water Board endorse the request made by the Armstrong-Spallumcheen Community Awareness Committee and forward the information to the Ministry of Environment."

CARRIED.

SEWAGE FACILITIES ASSISTANCE GRANTS:

Director Piazza raised the question of payment for connecting lines under the Sewage Assistance Grant formula.

The Administrator informed the Board that under the old system, the Water Board paid for 25% of any works funded by the Province. When the Provincial rules changed and collection systems were no longer funded, the Board ceased to pay as well.

Director Piazza also questioned the policy of not funding studies as these are necessary in order to get communities involved in upgrading their treatment systems.

The Administrator advised that while our fund does not cover the cost of studies for collection systems directly, once the cost is financed, the whole package is eligible for funding including studies, engineering, and actual works.

The attached list of Sewage Facilities Assistance Grants for 1989 was circulated.

Moved by Director Shewfelt and seconded by Alternate Director Hornby:

"That the outstanding amounts for 1989 Sewage Facilities Grants be approved for payment as listed."

CARRIED.

Directors Hill and Shewfelt left the meeting at 3:00 p.m. and the Chairman advised that we now lacked sufficient members to form a quorum.

NEW AND UNFINISHED BUSINESS:

F. Y. 1991-92

Fiscal Year 1991-92 Provisional Budget:

The Field Supervisor presented a provisional budget for Fiscal Year 1991-92 which the Ministry of

**OKANAGAN BASIN WATER BOARD**

**MINUTES OF A MEETING OF THE OKANAGAN BASIN WATER BOARD HELD ON TUESDAY, SEPTEMBER 11TH, 1990 IN THE BOARD ROOM, REGIONAL DISTRICT OF OKANAGAN SIMILKAMEEN, PENTICTON, B. C. AT 10:15 A.M.**

|                                 |                       |                             |
|---------------------------------|-----------------------|-----------------------------|
| <b><u>PRESENT:</u></b>          | Chairman S. Simpson   | C.O.R.D.                    |
|                                 | Director E. Lamont    | C.O.R.D.                    |
|                                 | Director A. Hill      | N.O.R.D.                    |
|                                 | Director M. Friesen   | N.O.R.D.                    |
|                                 | Director R. Shewfelt  | O.S.R.D.                    |
|                                 | Director D. Whittaker | O.S.R.D.                    |
|                                 | Director J. Piazza    | O.S.R.D.                    |
| <br><b><u>ALSO PRESENT:</u></b> | <br>P. Newroth        | <br>Ministry of Environment |
|                                 | M. Maxnuk             | Ministry of Environment     |
|                                 | R. Nickel             | Ministry of Environment     |
|                                 | G. Whitney            | Exec. Asst. to J. Whittaker |
| <br><b><u>STAFF:</u></b>        | <br>P. Mackiewich     | <br>Administrator           |

**MINUTES:**

Moved by Director Piazza, seconded by Director Whittaker:

"That the minutes of a regular meeting of the Okanagan Basin Water Board held on May 29, 1990 be adopted as circulated."

CARRIED.

**U.B.C.M. APPOINTMENT WITH MINISTRY OF ENVIRONMENT:**

The Chairman advised that she has made an appointment to meet with Ministry of Environment officials at the U.B.C.M. Conference on Wednesday, September 19, 1990 at 2:00 p.m. to endeavour to have the recommendations contained in the Okanagan Basin Implementation Study implemented.

**CORRESPONDENCE:**

**MINISTER OF ENVIRONMENT - Approval of Enhanced Budget:**

A letter from the Minister of Environment advising that in fiscal year 1990/91 it is proposed that up to \$252,000 be provided to the O.B.W.B. by the Province to acquire new control equipment and to improve existing machines under the 75/25% cost sharing arrangement and that, in addition, the Province will contribute 75% to operating funds to a maximum of \$262,000 was received for information.

Director Whittaker expressed concern that the aquatic weed harvesting program does not appear to be successful as the machine just cuts the tops of the weeds.

Mr. Maxnuk explained that the O.B.W.B. employs two methods of harvesting, one being cutting of the weeds and the second being rototilling the bottom of the lake. Harvesting allows a very fast treatment where derooting is very slow and expensive, but provides a better control. It has been the direction of the Ministry and the Board to increase the rototilling activities and to decrease harvesting.

Director Shewfelt noted that the reports on harvesting are negative, yet the reports on rototilling are positive.

Mr. Maxnuk explained that the existing rototillers are unacceptably slow. He also advised that if the funds approved to acquire new harvesting equipment are not used in fiscal year 1990/91, they will disappear as the funding has only been approved for one year.

Dr. Newroth advised that a variety of tools are needed to control weeds and that both cultivators and harvesters are needed. The enriched funding approved for this year will have to be requested again next year as these funds will not automatically be approved.

The Chairman suggested that the Board should embark on some educational programs covering aquatic weed control and should publish its aquatic weed harvesting schedule.

**ACQUISITION OF A NEW CONTROL MACHINE:**

Mr. Maxnuk showed a video of the rototiller which has been acquired by the Regional District of Columbia-Shuswap. He advised that this machine costs \$270,000, which sum did not include the guidance package. This machine is yet to be tested, however if it functions as the designers have anticipated, he suggested that the Water Board consider having a similar machine constructed.

Moved by Director Hill, seconded by Director Friesen:

"That provided the rototiller acquired by the Regional District of Columbia Shuswap operates satisfactorily, and subject to a favourable staff recommendation to the Board, tenders be called for the construction of a similar machine for the Okanagan Basin Water Board and, further, that the staff prepare recommendations for the required renovations to the existing harvesting equipment."

CARRIED.  
DIRECTOR SHEWFELT OPPOSED.

**VIEW OF EQUIPMENT AND FACILITIES:**

The Board **agreed** that the next meeting would be held in Vernon on October 16, 1990 at which time the Water Board facilities would be toured, including viewing Regional District of Columbia-Shuswap's new rototiller.

**BUDGET APPROVAL PROCESS:**

The Chairman expressed concern over the lateness of the Ministry approving the Board's Budget and that the Board must operate for over half of a harvesting season without knowing whether or not it has budgetary approval.

Dr. Newroth indicated that this problem needs to be addressed politically.

**MEMORANDUM OF CHAIRMAN - RECOMMENDATIONS OF IMPLEMENTATION STUDY:**

A memorandum from the Chairman covering the recommendations of the Okanagan Basin Implementation Board was circulated. The Chairman noted that the study did not address water quality and that there is no question that this is becoming an increasingly important concern to the residents of the valley.

She asked how the Board wishes to proceed in this regard.

Mr. R. Nickel noted that there is a lack of co-ordination covering watershed management. All plans being carried out by various Ministries and regional districts are done in isolation. The Ministry of Environment is planning to undertake a sub-regional plan on the Okanagan Lakes system. This plan isn't in place yet, but the scope of the work is to review the Okanagan Basin Study recommendations.

Director Lamont entered the meeting.

The Chairman noted that many reports and plans are currently sitting on the shelf and there is probably a greater need that ever to implement some of their recommendations.

Mr. Nickel reviewed the recommendations of the Okanagan Basin Implementation study with the Board as follows:

Item 2 - Review of Plan: This has not been done yet, however four planners have been assigned to the task of developing a sub-regional plan and Water Management will be the lead agency.

Item 3 - On-going Monitoring: This is being carried out by the Ministry of Environment.

Item 4 - Adoption of Recommendations - Indian Lands: Not done.

Item 5 - Operation - Okanagan Flood Control System: Being carried out by Ministry of Environment.

Director Shewfelt expressed concern that Okanagan Lake is dropping too fast and that the Board should have an explanation. He suggested that there be more communication between the Ministry of Environment and the Board.

Item 6 - Operation - Kalamalka/Wood Lake System: Being carried out by Ministry of Environment.

Item 7 - Flood Plain Zoning: Being carried out.

Item 8 - Water Intake Structural Requirements: Being adhered to.

Item 9 - Wharf and Boat Ramps Structural Requirements: No involvement from the Ministry of Environment standpoint.

Item 10 - Tributary Management - By and large being done.

Item 11 - Pump diversion to Vernon Creek - Being adhered to.

The Chairman stated that there is a public concern over whether there is enough water in the valley to sustain the valley's growth. Currently there is sufficient information on the shelf which can answered these concerns, however the impression is that the Implementation report just covers flood control.

Mr. Nickel stated that it is his understanding that if the recommendations contained in the report are followed, there is enough water in the valley to sustain growth.

Item 12 - Municipal & Industrial discharge to tributaries - Recommendations are being followed.

Director Hill asked why this recommendation did not include lakes, but only tributaries.

Mr. Nickel replied that total irrigation of sewage is good if it can be achieved. The problem is that the communities and the Province do not have sufficient monies. It is impossible to force everyone into spray irrigation and that it is the reason that the Okanagan Water Quality project was commenced. The thrust was to remove phosphorus from the water. It will take a mix of methods to remove the phosphorus, such as improve septic tanks, addressing the agricultural and forestry component, etc.

Item 13 - Phosphorus Removal: Waste water Treatment Plants - Mr. Nickel noted that in most cases the recommendations are exceeded.

Directors Hill and Friesen expressed concern that development on lakes does not respect political jurisdictions and that some pressure should be brought to bear to have municipal systems available to adjoining areas for protection of the lakes.

Director Whittaker agreed that the Board should look at the philosophy of what is best for the lakes system. Director Piazza noted that municipalities only contribute approximately 7% towards the capital cost of the sewage system, the rest of the funds coming from the Province and the O.B.W.B.

**GOALS:**

Moved by Director Friesen, seconded by Director Piazza:

"That a goal of the O.B.W.B. be to maintain and protect the valley lakes and that municipalities be requested to do what they can to ensure that services are extended to those areas requiring sewer services to achieve this Board's goal."

CARRIED.

It was suggested that the Board could be an agency to recommend priorities for sewage assistance funding and, as such, the funding would determine where the systems would be established.

Mr. Nickel advised that Waste Management Plans in most communities have been completed, however such plans have not been completed in Spallumcheen, Coldstream, Naramata, on Indian Reserves, the West Bench and electoral areas of the Regional District of Okanagan Similkameen.

Moved by Director Piazza, seconded by Director Shewfelt:

"That letters be written to the stated communities encouraging them to complete Waste Management Plans."

CARRIED.

Item 14 - Septic Tank Regulations & Inspections - Mr. Nickel advised that his Ministry has been dealing with Health and Municipal Affairs developing new septic tank regulations for the Okanagan Basin. These new regulations will be administered by the health ministry.



Director Shewfelt advised that in the U.S.A. a study of a new method of septic tank disposal has been completed which enables the installation of septic tanks right up to watercourses. Apparently use is being made of hog fuel and 100% evaporation is achieved.

Mr. Nickel suggested that the Board correspond with the Ministry of Health to encourage implementation of the new septic tank regulations.

Mr. Nickel was thanked for his presentation and the meeting recessed for lunch at 1:05 p.m.

#### **MEETING RECONVENED AT 2:15 P.M. in the absence of Director Whittaker**

The Board agreed that Items 15 - 25 of the Implementation Recommendations be addressed with Mr. Nickel at its next meeting.

#### **PHILOSOPHY:**

Director Shewfelt suggested that when meeting with the Ministry of Environment officials at U.B.C.M. it should be stressed that the Board is reviewing the recommendations of the Okanagan Basin Implementation report and that the Board will be going back to its mandate of water quality as well as quantity.

Director Lamont stated that the Water Board should be restructured to give it taxing authority so that it can be effective as a co-ordinating authority.

Discussion arose over the Board's mandate and concern was expressed that unless the role of the Board is strengthened the Board may as well be disbanded.

It was agreed that each Director ask its respective Regional District for support to expand the Board's mandate.

It was **agreed** that this be done after a common process is developed at the next meeting of the Board.

#### **DELEGATIONS:**

**Mr. George Frame** appeared before the Board and advised that he has an amphibian vehicle which tows a cultivator. He has successfully harvested 35 hectares of milfoil under contract to the Board and asked where he stands insofar as obtaining new contracts with the Board are concerned.

Mr. Maxnuk advised that Mr. Frame's machine did perform satisfactorily and is much faster than the rototiller. Mr. Maxnuk suggested that at the next meeting a derooting plan should be tabled and work can start in late October or early November.

#### **CONTRACTING:**

Moved by Director Lamont, seconded by Director Shewfelt:

"That a minimum of \$24,000 be allocated in the Board's budget for contracting work."

CARRIED.

Mr. Maxnuk stated that he would like to see how Mr. Frame's cultivator works in an area which has not been previously harvested.

**CORRESPONDENCE:****DR. D.A. KASIANCHUK, DIRECTOR WATER MANAGEMENT BRANCH - Acknowledge Budget Request:**

A letter from Dr. D. A. Kasianchuk, Director, Water Management Branch, acknowledging receipt of the Board's budget request for fiscal year 1991/92 and requesting work plan was received for information.

**H. J. HETTINGA, C.O.R.D. - Storm Sewer Discharge into Vernon Creek and Wood Lake:**

A copy of a letter to the Ministry of Environment from Mr. H. J. Hettinga, C.O.R.D, expressing concern over storm water sewage discharge into Vernon Creek and Wood Lake was received for information.

**DR. J.E. BRYAN, MINISTRY OF ENVIRONMENT - Response of Armstrong/Spallumcheen Community Awareness Committee:**

Correspondence from Dr. J. E. Bryan, Ministry of Environment, responding to the concerns of the Armstrong/Spallumcheen Community Awareness Committee regarding nutrient control in Deep Creek was received and filed.

**MINISTER OF AGRICULTURE - Research for Potential Biological Control:**

A letter from the Federal Minister of Agriculture was received advising that priorities for weed biological control programs are determined through consultation with Provincial government agencies and that priorities for B. C. are knapweed, houndstongue and toadflax and that our concerns for research on milfoil will be given consideration when decisions regarding future targeted weeds are made.

**L. MacWILLIAM, M.P. - Transcript House of Commons Transcript - Request for Federal Government to Investigate methods of control for Eurasian water milfoil:**

A copy of the House of Commons Transcript Debate covering Mr. MacWilliam's request that the Minister of Agriculture make a strong commitment to research ways of eradicating milfoil was received for information.

**MINISTER OF HEALTH - Additional Health Inspector:**

A copy of a letter from the Minister of Health to the Minister of Environment that to implement the proposed amendment to the sewage disposal regulations, three and one-half additional public health inspectors have been assigned to the Okanagan Basin area was received for information.

**FRESHWATER TREATMENT SYSTEMS - Use of water purifying bacteria to kill aquatic weed growth:**

Literature on the use of water purifying bacteria to kill aquatic weed growth was received and filed from Freshwater Treatment Systems.

**CITY OF PENTICTON - Request to harvest Oxbows:**

It was **agreed** that the request of the City of Penticton to harvest the Oxbows in Okanagan River be considered when completing the Operational Plan for the next fiscal year.

**DISTRICT OF SUMMERLAND - Sewage Funding Assistance:**

Copies of a letter from the District of Summerland to the Provincial and Federal Ministers of Environment looking for alternative sources of funding for the installation of sewage treatment facilities was received and endorsed.

**REGIONAL DISTRICT OF NORTH OKANAGAN - Use of Road Salts:**

A copy of a letter from the Regional District of North Okanagan to the Ministry of Environment expressing concern over the impact of road salts on our lake system was received for information.

**TOWN OF OSOYOOS - Sewage Service beyond Boundaries:**

A letter from the Town of Osoyoos advising that their sewage lagoon can only accept collected sewage and that only an engineering study can determine whether the Town's lines and equipment can accept additional sewage and what the cost for capital and operation would be was received for information.

**AQUA RESEARCH & DEVELOPMENTS INC. - Services Available:**

Correspondence from Aqua Research & Developments Inc. advising that their company can provide consulting, contracting, and can offer specialized equipment for sale was received for information.

**SEWAGE FACILITIES ASSISTANCE GRANTS:**

Moved by Director Lamont, seconded by Director Shewfelt:

"That the grant applications received from the City of Kelowna in the amount of \$246,651.93 and the City of Penticton in the amount of \$97,949.17 be approved for payment."

CARRIED.

**Project Funding:**

Information received from the City of Kelowna, Regional District of Okanagan Similkameen and the District of Coldstream covering the projects being funded by O.B.W.B. grants was noted.

**NEW AND UNFINISHED BUSINESS:**

**PROVINCE/O.B.W.B. Agreement - Draft No. 6:**

The Administrator expressed his concern that Draft No. 6 of the new agreement still reflects a servant/master relationship insofar as the Province's request for indemnity is concerned.

It was **agreed** that the concern is valid and that further negotiations be carried out with the Ministry of Environment in this regard.

**WORK PLAN - Fiscal Year 1990/91 and 1991/92:**

It was **agreed** that the Work Plan for the next fiscal years including the acquisition of new equipment and improvements to existing machines be considered at the next meeting.

**COST-SHARE PURCHASE OF NEW MOTORS FOR WORK BOAT:**

Moved by Director Lamont, seconded by Director Shewfelt:

"That the O.B.W.B. agree to cost-share in the purchase of two new outboard motors for the Ministry's work boat at an approximate cost of \$10,000."

CARRIED.

**ACQUIRE CAR TOP FOR AN OUTBOARD:**

Mr. Maxnuk advised that several years ago, two aluminum boats were stolen from the Water Board's yard in Kelowna, which boats have not been replaced but are now required.

Moved by Director Shewfelt, seconded by Director Lamont:

"That one (1) cartop aluminum boat and outboard motor be purchased for approximately \$2,500 under the 75/25% cost-sharing arrangement."

CARRIED.

**PURPLE LOOSETRIFE:**

Dr. Newroth advised that an exotic wetland plant called "Purple Loosetrife" has invaded some of the waterways of the Okanagan.

The Ministry is not sure whether or not this weed threatens wildlife because insufficient studies have been carried out. The weed is presently growing in the channel of Okanagan Lake and the Ministry is not sure of all the locations where it exists, but does know that each plant gives off in excess of 300,000 seeds. It is anticipated that the main impact of this weed will be on waterfowl because it grows so thick that water fowl cannot get through it.

The weed is not currently on the noxious weed list in the Province. Dr. Newroth suggested that if the Board is concerned over this weed, they should advise the Ministry of Environment.

It was **agreed** that information on this weed be photocopied and be circulated to the Board at the next meeting.

**OTHER MATTERS:**

**RE-ORGANIZATION OF AGENDA:**

Mr. Maxnuk and Dr. Newroth asked whether the agenda could be reorganized so that all aquatic weed harvesting business can be placed under one category and be dealt with at the first part of the meeting or whether an Aquatic Plant Management meeting be held to deal with these matters.

The Chairman advised that the Board has a dilemma because it has expanded its mandate and therefore the agenda items are also more plentiful.

It was **agreed** after some discussion that the Board set aside the mornings to deal with aquatic weed problems and deal with the other types of business in the afternoon.

**NEXT MEETING:**

It was **agreed** that the next meeting be held in Vernon to commence at 10:00 a.m. with a tour of the Okanagan Basin Water Board's facilities, as well as to view the rototiller purchased by the Regional District of Columbia-Shuswap, with the regular meeting of the Board to commence in the afternoon.

**ADJOURNMENT:**

There being no further business, the meeting adjourned at 3:35 p.m. on a motion of Director Hill.

  
CHAIRMAN

  
SECRETARY-TREASURER

PM/las