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A WATER QUALITY COMMUNICATIONS PLAN

Prepared for:

Water Quality Branch Inland Waters Directorate Environment Canada

March 1989

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1.0 Introduction

The Water Quality Branch of Environment Canada's Inland Waters Directorate has identified new opportunities to utilize its expertise and extensive water quality information for an expanded communications initiative. The fact that Canadians are very concerned with the quality of their water resources opens up possibilities for a new leadership role in public education and involvement.

Synergistics Consulting Limited was asked to develop a two-year communications plan for the Branch with two major goals:

- 1) To increase the profile and importance of water quality to Canadians; and,
- 2) To raise the profile of the activities of the Water Quality Branch, both inside and outside government.

After conducting research with Branch personnel and other water quality experts across Canada, and studying recent public opinion research, Synergistics has developed a plan that will:

- Establish for the Water Quality Branch, a communications function oriented towards the general public and non-government water specialists, which will serve to expand understanding of water quality issues in Canada as well as expanding the Branch's role, recognition and resources.
- Put in place credible, effective and well-distributed communication mechanisms that will reach key audiences with appropriate water quality messages.

This communications plan has been designed to be consistent with the Department's Water Awareness Program. Some of the mechanisms initiated by the Water Quality Branch will therefore serve as pilots for the Departmental program.

This plan is an important step in re-orienting a portion of the Water Quality Branch's resources towards the dissemination of information and solutions on water quality issues. Such an expanded function is consistent with the Branch's mandate.

2.0 The Public Perspective

The following summary of public perceptions of environmental and water quality issues is based on data provided by The Environmental Monitor.

• Water quality is a top environmental issue.

Canadians' concern about water quality continues to increase, and now ranks second among the major environmental issues. Those very concerned increased by 6% in the past year to 74%.

Other water issues are also at the top of the list of environmental concerns. Toxic chemicals are the number one issue and acid rain is the third most important. Concern levels for these issues have risen by 8% and 6% respectively.

• Environment is a human health issue.

Human health is the primary reason for Canadians' concern with the environment. The public's anxiety about water quality is based primarily on fear of toxic chemical contamination. One-third of Canadians believe unsafe levels of hazardous chemicals are definitely present in their drinking water and another one-third believe they are likely present.

However, Canadians' anxiety about the environment is not only focused on themselves. Four out of five are also very concerned about the health of future generations. And 71% are very concerned about the effects of environmental pollution on wildlife and forests.

Concern about water quality is highest in Quebec with 85% very concerned and lowest in Manitoba and Saskatchewan (59 and 61% very concerned).

• Many Canadians are avoiding exposure to hazardous chemicals.

One half of Canadians say that they have taken action to avoid exposure to hazardous chemicals in food, water or the environment. Twelve per cent have attempted to avoid chemicals in tap water by drinking bottled water or installing a water treatment device in their homes. One in five (21%) Torontonians have taken this step.

• Water supply concern is growing, but water quality is biggest concern.

Although concern has doubled from 22% in 1984 to 47% in 1988, Canadians are much less concerned with the possibility of water shortages than with the quality of water.

• Canadians share the responsibility for the environment.

The public wants the federal government to lead collective action to protect the environment and involve all Canadians. Apart from the federal government, Canadians do not assign responsibility for the environment to particular institutions, as much as to Canadians generally. One-third believe the federal government has primary responsibility for protecting the environment. Another one-quarter think that individual Canadians are the most responsible for environmental protection. And 21% voluntarily stated in a survey that responsibility should be shared. Despite their extensive jurisdictional powers, only 8% hold provincial governments primarily responsible.

In another question, 62% said that citizens have a great deal of responsibility to minimize their purchase and use of products containing hazardous chemicals.

• Government is not the most trusted source of information.

Canadians are inclined to believe the worst about the quality of their environment. They want and need to know more in order to convert their fears into informed concern. But most Canadians do not have confidence about information on environmental issues coming from government and industry sources. Scientists (55%), followed by environmental groups (40%) are the most credible sources of information for the public. Twentythree percent trust Environment Canada's information — the same proportion that looks to television and newspapers. Hence, the Department would benefit from partnerships with professional groups and ENGOs in its water communications.

3.0 Expert Opinion

Many valuable insights about the Branch and its activities were derived from interviews with the Chiefs of the Water Quality Branch in the five regions, the Regional Directors of the Inland Waters Directorate, WQB and IWD senior management at Headquarters in Ottawa, water quality experts in other federal departments, provincial water quality officials, and water quality specialists working in non-government research institutions.

A more complete overview of these interviews can be found in Appendix A, but a number of key findings are incorporated into the analysis that follows.

3.1 Barriers to Change

An analysis of the key informant interview results has identified a number of barriers to achieving the goals the Water Quality Branch has set for itself.

• The limited relevance of raw data.

Most of the Branch's resources have traditionally been assigned to the collection, analysis, storage and management of water quality data. As a result, most of the reporting and communications efforts have focused on highly technical publications for other scientists. In the absence of further interpretation of the data, the Branch has had great difficulty reaching those in the public interested in water quality issues.

• The program basis for data collection.

Most of the data collected by the Branch has served as a contribution to programs negotiated with other government agencies, usually federal or foreign, but increasingly with the provinces. Far fewer resources have been directed towards the interpretation of data. This has limited the ability of the Water Quality Branch to add value to the data it collects and make it useable for additional purposes and audiences.

According to non-government water specialists, the program-basis for data collection has also limited the development of newer, more advanced methodologies for water quality analysis. Although the Branch is increasingly adopting a multi-disciplinary "ecosystem" approach to its science, insufficient resources have been applied to working with other specialists in the field to update its methodologies.

Program-based monitoring has also hindered the development of more issue-oriented scientific research. On-going participation in the community of water quality specialists, as well as communications with the

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• An extensive water quality data base.

The Branch's extensive national data base provides a major resource from which it can develop a credible science-based leadership role on water quality issues.

• Collaborative initiatives with other agencies.

The limited resources of most water agencies creates opportunities for joint development and delivery of water quality information. Opportunities exist for the Branch to expand its relations with other agencies, particularly those outside of government, by sharing data, methodologies, research, and communication messages.

• Implementation of the Water Awareness Program.

The existence of the Water Awareness Program provides the Branch with an opportunity to participate in a significant IWD communications initiative. Delivery of several of the water quality aspects of the Water Awareness Program will serve as a pilot project for the program as a whole.

4.0 Audiences

Water Quality Branch communications should focus on several primary audiences and several secondary ones.

The primary audiences are external public audiences:

- The general public, and
- Non-government water specialists.

The secondary audiences are internal to the federal government:

- The Department of the Environment, and
- Other federal departments.

With several exceptions, communications mechanisms discussed in this plan will focus on the two primary audiences. They will provide the means by which the other two audiences will be reached. In other cases, the secondary audiences will be partners with the Branch in reaching the general public. Improved internal communications will result from increased interaction and collaborative communications initiatives with other federal agencies and from a more dynamic and higher public profile.

A fifth possible audience, provincial governments, is not included in this plan for several reasons. New developments have led or likely will lead to increased co-operative activity. Considerable attention has been devoted to these relationships over the past few years through such mechanisms as federal-provincial water quality agreements, the Canadian Council of Resource and Environment Ministers (CCREM), and the new Canadian Environmental Protection Act (CEPA). Shrinking resources at both levels and the development of multi-disciplinary approaches to water quality issues has also necessitate an increased level of co-operation.

4.1 The General Public

Public opinion research showing the high level of concern with the quality of Canadian water and the desire for leadership and opportunities for individual involvement, as well as the expressed aims of the Water Quality Branch, provide both the need and opportunity for new water quality communications initiatives for the general public. Objective information about the quality of water in Canada and practical advice to individuals on preserving water quality will be essential ingredients of this plan.

4.2 Non-government Water Specialists

Increased links to non-government water specialists is necessary in order for the Branch to expand the activities within its mandate. It will establish stronger links between the Branch's program-based water quality monitoring and scientific developments within its external peer groups.

Partnerships with non-government water scientists are also an important avenue to reach the general public with water quality information. This is particularly important because Canadians believe that independent scientists are far more credible sources of information about environmental issues than governments.

4.3 Environment Canada

Departmental audiences for this plan include the minister, senior management, the Conservation and Protection Service and other parts of the Inland Waters Directorate. Increased public communications activity will lead to a higher public profile for the Water Quality Branch and an improved ability to attract resources. Again, partnerships with other parts of the Department should be established on communications initiatives whenever feasible. However, the profile of the Branch should be maintained in these initiatives.

4.4 Other Federal Departments

Communications audiences and potential communications partners within other federal departments include the Departments of Health and Welfare, Energy, Mines and Resources, Fisheries and Oceans, and Agriculture Canada. Given that much of the past lack of joint initiatives has been due to divided jurisdictions, a communications plan cannot address all the issues involved in these relationships. However, joint communications are a means by which areas of common interest can be identified and developed, which can in turn serve to foster collaboration in other areas.

5.0 Overall Approach

In keeping with the requirements of this task, much of the overall approach to this communications plan reflects the approach taken by the Department's Water Awareness Program. This plan will:

- Recommend mechanisms by which the scientific findings on water quality can be presented to the public in a non-technical manner.
- Focus on synthesizing, interpreting and disseminating research data.
- Emphasize solution-oriented information about major water quality problems.
- Encourage and motivate individual Canadians to personally participate in preserving Canada's water quality.
- Be consistent with the mandate of the Water Quality Branch and Environment Canada.

Also in keeping with the Water Awareness Program, this communication plan is based on the assumption that programs and mechanisms are best developed and delivered through partnerships with others in the water field. Effective implementation of the plan will build a communications partnership with other water agencies, including federal and provincial departments, non-government water organizations, and private sector organizations. Section 9.0 below will discuss the practical implications of this approach in greater detail.

Another element of the approach is to provide a national framework and level of activity within which the Branch's region-based communications can prosper. Water is a subject that needs mainly localized communications and the Branch's regional offices are best able to do this. However, without these efforts being coordinated within a strategic framework and supported with some common national elements, impact and effectiveness will continue to be limited.

This communication plan will also serve as a pilot for the more comprehensive Water Awareness Program. To that end, several of the proposed mechanisms are adopted from that Program. Those chosen to be incorporated into this plan:

- Have a water quality focus,
- Respond to specific needs and concerns of the Water Quality Branch, and
- Will enhance the Branch's partnership with other water agencies.

6.0 Communications Objectives

The central goal of this communications plan is:

• To provide the general public and water specialists with credible information on the quality of Canadian waters, and promote solutions to water quality issues through collaborative efforts with other agencies.

The specific objectives of the plan are:

- 1) To respond to public fears about toxic chemical contamination of water with understandable and scientifically credible information about the quality of Canadian waters and efforts by water specialists to monitor them.
- 2) To develop public awareness of solutions being developed and implemented to address water quality problems in Canada.
- 3) To encourage and provide the means for individual Canadians to take personal action to preserve the quality of Canadian water.
- 4) To enhance the credibility and reach of water quality information through mechanisms developed and delivered in partnership with other water quality agencies.
- 5) To encourage and promote an ongoing exchange and dissemination of water quality research among water specialists in all sectors.
- 6) To establish a leadership role on water quality issues for the Water Quality Branch within Environment Canada, the federal government, and with the public generally.
- 7) To increase the understanding of public concerns about water quality among Water Quality Branch scientists and water specialists generally.
- 8) To increase the public and media communications skills of Water Quality Branch scientists.

7.0 Messages

This communications plan will deliver a number of messages to nationwide audiences. Variations and additions may also be delivered on a regional basis. Messages for the two key audiences are as follows:

7.1 General Public

- Protecting water quality is essential to maintain overall environmental quality and human health. Because water both transmits and stores much of society's wastes, it serves as a barometer of how well we're doing elsewhere.
- Water quality is being closely monitored in Canada by specialists both inside and outside government.
- Despite legitimate concerns about toxic chemicals in water bodies, Canada's ambient water supply is safe for most uses.
- Actions by individual Canadians can play an important role in preserving the quality of our water.
- The value of Canada's water supply for all uses is dependent primarily on its ambient quality. Improving and maintaining water quality will require the concerted effort of all Canadians.

7.2 Non-government Water Specialists

- Agencies involved in water research will individually benefit and collectively have a greater impact through expanded research and communications partnerships.
- A degree of advocacy is necessary to earn public trust and credibility and to attract attention to public education efforts.
- The Water Quality Branch is willing and able to provide leadership and to play a catalytic role in public education.

8.0 National Mechanisms

A number of mechanisms have been developed for the two key audiences – the general public and non-government water specialists. These are, in the consultant's view, the most cost effective means to reach the designated audiences. In each case, the mechanisms will emphasize solutions to water quality concerns and problems, and will provide many opportunities for extension through the communication efforts of regional offices.

The recommended national communication mechanisms, with their primary audience, are as follows:

The General Public:

- A Householder's Guide to Conserving Water.
- A film or video on the state of water quality in Canada.
- Media relations training for departmental scientists.

Non-government water specialists:

- A state of the environment report on water quality.
- A water quality poster.
- A symposium series on water quality issues.

Several mechanisms for future consideration are also discussed briefly. They are:

- Development of a "water quality index"
- A joint conference and publication with Health and Welfare on water quality and public health.

A detailed discussion on each of the recommended mechanisms follows.

8.1 The Householder's Guide to Conserving Water

Objectives

The Householder's Guide to Conserving Water will fulfill the following objectives:

- To respond to Canadians' desire to take personal action on one of their most important environmental concerns.
- To present a solutions-oriented message about water quality to audiences who are often inundated with problem-based information about the state of our environment.
- To provide practical information to Canadians that will be useful in making behaviour/lifestyle decisions relevant to water quality.
- To demonstrate that Environment Canada through the Water Quality Branch is actively responding to this major environmental concern of Canadians.
- To position the Water Quality Branch as a leader in water quality protection issues.
- To serve as an important step in assisting the Water Quality Branch to expand its working relationships with other organizations involved with water quality issues.

Concept

This guide will be much like the energy conservation guides of the late 1970s. It will contain practical ideas on how individuals can contribute to preserving water quality through actions in the home and public places, including outdoor recreational settings. This mechanism is derived from the Water Awareness Program.

Content

Topics to be covered will include: what should and what should not go down the drain, alternatives to chemicals used around the home, drinking tap versus bottled water, in-home water filters, hints on using less water, water quality advice for boaters, questions to ask your municipal water works manager, comparative water pricing across Canada, etc. It will include a separate section on what kids can do and what families can do together. All ideas will be presented in the detail required for action. The booklet's tone will be positive, light and somewhat humourous, using many diagrams, and perhaps a cartoon-like character, to communicate the ideas.

Format

The booklet should be two-colours throughout, $10 \ge 8$ inches in size and 24 pages in length with separate French and English editions. 20,000 copies should be printed initially, with a second edition printed once the full possibilities of distribution are assessed.

Preparation

This guide should be produced with the active, paid participation and hence "ownership", of ENGOs and other water quality specialists with experience and access to consumers. These groups should be involved at the outset in designing the concept and later in contributing to its content. Different tasks could be assigned to the various parties. Full credit would be given on the title page to all participating groups. This will help ensure the credibility and broad "ownership" of the booklet.

Distribution

Because of the early involvement of the intermediary groups mentioned above, they also will want to distribute the booklet through their networks. They will also be able to distribute the guide to other community groups.

The booklet should ideally be timed for release in spring when people begin thinking about and preparing for warm weather outdoor activities.

8.2 A Film or Video on Water Quality.

Objectives

- To create an awareness, among high school age children, of the value of water resources to our society and the importance of preserving water quality.
- To present a solutions-oriented message about water quality to audiences who are often inundated with problem-based information about the state of our environment.
- To present, in an appealing visual manner, the data and insights gathered and developed by the Water Quality Branch and other water agencies, to a more general public audience.
- To position the Water Quality Branch as a credible and effective source of water quality information among teachers, who act as key information disseminators in our society.

Concept

The film or video should focus on the state of water quality in Canada.

The film or video should be produced through the Canadian Council of Ministers of Environment (CCME) together with a film agency such as the National Film Board or TV Ontario. Much of the film could dramatize the State of the Environment Report on water quality in Canada. A secondary emphasis should be on implications of and solutions to water quality problems, focusing on the contributions of individuals, organizations and government.

The film should be $27 \ 1/2$ minutes in length, allowing for screening on educational and other TV outlets.

Distribution

Distribution to schools throughout Canada will be enhanced by provincial involvement (via CCME) in the development phase and the NFB in the production and distribution phase.

8.3 Media Relations Training

The Water Quality Branch should provide media relations training for selected scientists within programs in which public interface is strategically important. Training should be piloted by a few scientists, with additional scientists trained as experience is gained.

The focus of expanded media relations should be a pro-active effort to get messages about water quality issues out to the public, through science and public affairs, as well as news programs.

Although participants will require clear guidelines, they should be neither spokespersons for government policies or positions, nor advocates of particular policy responses. Surveys show that independent scientists are the most credible sources of information on environmental matters, so they should be encouraged to speak only from their science base of knowledge.

A rigorous two-day training session, using sound recording and video feedback techniques should be used, conducted by outside professional trainers.

8.4 A State of the Environment Report on Water Quality

An SOE report on water quality in Canada should be produced, integrating and synthesizing data and analysis from other departments, the provinces and independent water experts. Although the Report will be general in nature and available to the general public, the most important audience will be specialists in the field, ENGOs and policy/decision-makers. The United States Geological Survey's *National Water Summary* provides a useful model for such a publication.

The report should rely heavily on maps and graphics to deliver national and regional information on the state of Canadian water quality.

It should be written internally and printed externally. A media relations campaign should accompany its release.

Apart from promotional copies, a modest fee should apply for copies of the report.

8.5 A Water Quality Poster

A poster on water quality, sponsored by the Water Quality Branch is already in process. The full-colour poster should be creative and attractive, aimed at encouraging Canadians to value and preserve the quality of their water resources.

Water experts will be the major means of distributing the poster, although it should be available to the general public upon request. Displays of the poster in Environment Canada offices and those of other water specialists will reach members of the interested public, and also create identification for the Branch among these specialists.

8.6 A Symposium Series

A symposium series should be initiated for government and nongovernment water quality specialists. Topics would range from major topical issues such as The Fraser River or groundwater contamination, to technical issues such as methodologies and data exchange and access.

Responsibility for organizing the symposia should rotate among IWD regions. Two symposia should be held per year.

8.7 Interpretive Reports

Two or three interpretive reports should be issued annually. These reports should synthesize current research on topical water quality issues. They should focus on specific issues such as wetlands or groundwater, rather than geographic areas, unless a particular body of water itself has become an issue, such as the St. Lawrence or Fraser Rivers. Current technical reporting should continue, but should be seen as part of the research process (and budget), so some resources can be diverted to the interpretive reports. The reports would be targeted for decision makers, students and researchers requiring water quality information. These will effectively bridge the gap between data collection and public interest in water quality issues.

These reports should be desk-top published within the Department, with covers designed and printed externally.

8.8 Future Mechanisms

In addition to the mechanisms for the two years covered by this communications plan, a number of others should be initiated for implementation beyond the two year period.

• Water Quality Index

A water quality index, an idea already discussed within the Water Quality Branch, should be developed. It would provide a powerful reference point for both scientific research and public information. Given the time required to create an index, early contact should be established with other departments, provinces and independent experts to develop the concept. A pilot could be implementated in three to four years.

• Water Quality and Public Health

A joint conference and publication should be developed with Health and Welfare Canada. This effort would promote the idea that an adequate supply of clean drinking water requires all Canadians to conserve and protect the water in the country's lakes and rivers.

9.0 Implementation

The implementation of the recommended mechanisms requires that considerable attention be paid to effective process, with a particular emphasis on developing partnerships. <u>How</u> things are done will often be as important as <u>what</u> is done.

Many agencies are involved in water quality, each with its own jurisdiction and mandate. Divided federal and provincial responsibilities for water, and the decentralized structure of the Water Quality Branch are particularly relevant. The limited resources of each agency also require that initiatives be collaborative.

9.1 Working in Partnership

Public opinion polls clearly show that Canadians want all responsible parties to work together to solve environmental problems. A partnership approach is also consistent with the development, in recent years, of federal-provincial sharing of data collection and research. Communications initiatives which overlook this trend have less credibility and will risk jeopardizing the benefits of past collaboration. Federal leadership of joint efforts also reflects Canadians' expectations of the federal government's role in environmental protection. (See 2.1 above.)

Partners should be brought in when the mechanisms are being conceptualized, so that each participating agency develops full ownership of the ideas and the process. Careful attention to the strengths of each of the partners can lever projects to a higher level of quality and credibility.

The most important partnership to be built for Water Quality Branch communications is the one among the regions and headquarters. Given the regional and local nature of many water quality issues, as well as the regions' more direct contact with the public, their role will be critical in the development and delivery of communications mechanisms. Water Quality Branch headquarters should function in a coordinating role for most communications initiatives, while depending on regional expertise for content and delivery.

9.2 Recommendations

A number of specific actions should be taken to ensure the participation of the various players in the water quality field. They include:

• Semi-annual Branch communications planning meetings.

The Water Quality Branch should hold communications planning meetings twice each year to ensure co-ordination of Branch communications activity, and to share ideas. The first such meeting should focus on this plan, in order to develop a common understanding of the process required to implement its recommendations, as well as to determine the roles of each of the regions in national communications activities. Subsequent meetings will build on the initial experience. They should also be used to approve priorities and budgets for Branch communications activities.

• Partnership workshops with other water quality agencies.

Using this plan as a point of discussion, an initial series of workshops should be held with other agencies actively communicating in the water field. Two workshops should be held in the following order:

- 1) Other federal departments, including Health and Welfare, Fisheries and Oceans, Energy, Mines and Resources, Agriculture Canada, and Indian and Northern Affairs.
- 2) Provincial representatives, non-government water specialists and ENGOs.

The workshops will at least enable participating agencies and organizations to exchange plans, ideas and successes related to their communication activities. At best, they may help establish some common objectives, approaches and messages for water quality communications among these groups. These initial workshops will also serve to identify those agencies and groups interested in collaborating on the specific communication vehicles recommended in this plan.

These partnership workshops should not be seen as isolated events, but rather as regular punctuation marks in an on-going collaboration, in which the Branch initiates regular contact with key groups around joint projects, data transfer or more general information exchange.

Project-specific working groups.

Small working groups, involving knowledgeable representatives of key partner organizations (such as ENGOs, professional groups, and other federal departments), should be used to ensure on-going dialogue and direction for specific communication vehicles being developed under this plan. These should be constituted and run along the lines of those regularly put together by such agencies as Health and Welfare Canada. Their role would be to advise and react to interim versions of each vehicle or mechanism, and to prepare their networks for using and distributing the resulting vehicles.

10.0 Next Steps

The following workplan outlines a progression of steps that could be followed in putting this communication plan in motion.

1. Plan Adoption

- a) Widely circulate the communication plan within the Branch and IWD.
- b) Hold regional and headquarters meetings to discuss the implications and details of the plan.
- c) Modify/adopt plan at Branch directors meeting.

2. Implementation Planning

- a) Identify lead personnel for communications in each region and in HQ, and task each to develop a two-year implementation plan and budget.
- b) Hold first Branch communications planning meeting to aggregate the plans and identify roles and detailed priorities for implementation.

3. Initial Consultation

- a) Prepare a summarized communication plan for external circulation and send to potential partners both nationally and regionally.
- b) Identify major partners within the Department 1 the federal government (both regionally and in Ottawa), and hold initial "partnership workshop" to gain their views and expressions of interest in collaboration.
- c) Identify potential partners in provincial governments, ENGOs and non-governmental water institutes and conduct regional/national "partnership workshops" to gain their views and expressions of interest in collaboration.

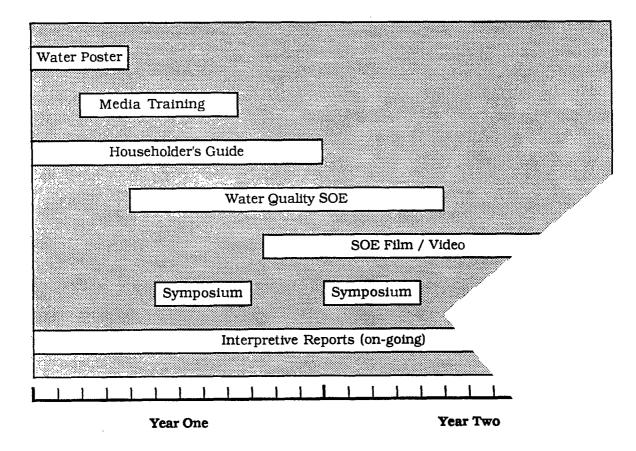
4. Development Phase

- a) Establish internal/external working groups to oversee the development of each major communication vehicle.
- b) Ensure the active involvement of partners throughout the development phase and on into the implementation phase of the plan, through regular meetings and tele-conferencing of the project-specific working groups.

11.0 Timeline

Conceptually, the phasing of the different components of this two-year communication plan is given below.

Water Quality Communication Plan



12.0 Implications For Branch and Programs

12.1 A New Orientation

Effective communications is essential to increasing the Branch's profile and resources. This plan is designed to be one of the means by which the Water Quality Branch can shift the balance of its activities from data collection to interpreting and reporting water quality information. The communications needs of the Branch should begin to play a major role in shaping overall Branch priorities.

The implementation of the proposed mechanisms will develop the Branch's expertise in communicating and interacting more effectively with its major audiences and peer groups inside and outside of government.

However, the Branch will also have to commit itself to a broader process of re-evaluation and change if it wants to fully capitalize on the opportunities open to it. Some long-standing self-perceptions and tasks will no doubt undergo changes in the process. This is a necessary part of the process of becoming more effective communicators. More positively, these challenges present an opportunity to explore new dimensions of the Branch's mandate and to better respond to changing societal needs.

This change of emphasis by the Branch can be summarized as follows:

OLD	NEW
Science-based	Science-based
Data collection	Interpreting, synthesizing and reporting data
Raw data output	Value-added outputs
Building trend data base	Flagging trends
Project/program driven	lssues driven, driving programs
Government, professional audiences	Public audiences
Doers	Managers and communicators

Responsive research

Proactive educators, mobilizers

12.2 General Implications

The recommended increase in interaction between the Branch and nongovernment partners will have a number of beneficial effects on the Branch's programs and image.

• From Programs to Issues

Increased working relationships with other water specialists will influence the Branch to be driven to a greater degree by the current issues in the scientific community, and less in response to other department agencies. Becoming more issue-driven than program-driven will allow for a more distinct and independent contribution by the Water Quality Branch to DOE programs and activities.

• Improved Branch Morale

New communication initiatives, undertaken jointly by all Branch operations and successfully delivered to external audiences, have the potential of improving morale and collegiality among Water Quality Branch personnel across the country.

• Internal Profile and Resources

A greater profile for the Branch outside of government, along with a more independent voice, will also lead to improved credibility, profile and resources within government.

It should be noted that an effective communications function requires ongoing awareness of the perceptions and attitudes of the public and key stakeholder groups. As a result, the Water Quality Branch will need to develop an ability to monitor public perceptions and needs on an on-going basis.

12.3 Implications for Branch Publications

An important implication of the communication plan's emphasis on reaching a more general audience, is that the Branch's technical publishing function will need to be retooled from being mainly content-driven to being audience-driven. Some of the specific aspects of this are as follows:

- Print materials should be written and graphically designed to reach the general interested public. Current publications appear to be directed to largely scientific or governmental audiences.
- The topics of publications should be more clearly directed towards specific public concerns, issues and activities.

- As much as possible the health aspects of water quality issues should form a component of publications (perhaps written by Health and Welfare), because public concern with water quality is based primarily on concern with health.
- The current prominence of references to the Branch's techniques, analysis, methods and equipment should be minimized, and the relevance of the information to public concerns and issues should be emphasized. Although scientific and technical expertise must be an essential ingredient in Water Quality Branch communications, on its own it contributes little to understanding or credibility.

12.4 Resource Requirements

1.

A shift within the Branch's mandate will require a re-allocation of resources from some previous areas to new ones. The consultant's recommendation is that the Water Quality Branch commit itself to a target of allocating 10% of its budget to communications within five years.

A further recommendation is that the budget for the national mechanisms outlined in the communication plan should be shared equally between headquarters and the regions.

13.0 Budget Requirements

The following is the minimum budget required to implement the two year water quality communication plan outlined above. The dollar requirements will only be able to be kept to these minimum levels by applying a total of 7 person-years in headquarters to the implementation task. These 7 would form a new HQ technical communications unit consisting of the following positions: manager, internal coordinator, external coordinator, managing editor, 2 writer/editors, and a desktop publishing specialist. In addition to these HQ staff resources, each Region would need to allocate at least a partial person-year to ensure adequate regional involvement and coordination.

Should this level of staffing not be possible, undertaking the plan using external resources would require between two and three times the budget outlined below.

It should be noted that, given IWD's commitment to at least a modest Water Awareness Program and the priority the Departmental Communications Directorate is giving to mobilizing public awareness and action, there is a significant likelihood that resources external to the Water Quality Branch would be available to help fund this communication plan.

I	tem	Year One	Year Two
1. House	holders' Guide	100K	50K*
2. SOE V	ideo (DOE portion)		75K
3. Media	Relations Training	10K	
4. SOE or	n Water Quality	10K	40K
5. Water	Quality Poster	15K	
6. Sympo	sium Series	n/c	n/c
7. Interp	retive Reports (10K x 5)	20K	30K
			<u></u>
Totals		155K	195K
Person Years		4	7

Budget

*Environment Canada's share of the cost for second year reprint.

14.0 Evaluation

Assessing the impact of the water quality communication plan will be important to justifying the on-going allocation of resources.

14.1 Methodology

The proposed evaluation design would use three tools to gather the information needed for this evaluation:

- A thorough monitoring and reporting system to gather Regional data on the demand for and response to the national and regional vehicles in the plan.
- A survey of partners half way through Year Two to assess their views of both the process and impacts of the plan, and any changes in their view of the Branch.
- A bank of omnibus questions added to a national public opinion survey to track changes in water-related attitudes and perceptions over time. (Such a bank of questions are called for in the evaluation design for the IWD Water Awareness Program.)

14.2 Performance Measures

For each of the communication objectives given in section 6.0 above, the following performance measures would be used to assess performance and overall effectiveness of the plan.

1) To provide the public with understandable and scientifically credible information about the quality of Canadian waters and efforts by water specialists to monitor them.

Evidence that the general public, including school age children in particular, has accessed information about the quality of Canadian waters.

Increased public awareness of the quality of Canadian waters.

2) To develop public awareness of solutions being developed and implemented to address Canadian water quality problems.

Increased public awareness of the real nature of water quality problems, and hence the kinds of solutions requiring priority attention.

3) To encourage and provide the means for individual Canadians to take personal action to protect the quality of Canadian water.

Evidence that Canadians are becoming increasingly involved in protecting the quality of Canadian water.

Public demand and response to materials providing practical advice on preserving water.

4) To enhance the credibility and reach of water quality information by delivering mechanisms developed in partnership among government and non-government water specialists.

Number and diversity of water quality agencies participating in Branch communications activities.

Changes in perceived credibility of government and nongovernmental scientists and other experts.

5) To encourage and promote an on-going exchange and dissemination of water quality research among water specialists in

Evidence of increased interaction between the Water Quality Branch and other water quality agencies, and the levels of satisfaction about the quality of this interaction by all parties.

6) To establish a leadership role on water quality issues for the Water Quality Branch within Environment Canada, the federal government, and with the public generally.

Increased profile and participation by the Water Quality Branch in federal government water quality initiatives.

Increased recognition and credibility of the Branch among its peers, and with the public.

7) To increase the understanding of public concerns about water quality among Water Quality Branch scientists and water specialists generally.

The degree to which Branch personnel are knowledgeable about current public opinion trends, and the extent to which long term public concerns shape Branch communication and program priorities.

8) To increase the public and media communications skills of Water Quality Branch scientists. Extent to which departmental scientists have successful contact with the media.

Increase in the amount of air time and column inches featuring departmental scientists in the media.

Appendix: Summary Of Key Informant Interviews

A portion of the research process consisted of key informant interviews conducted by telephone with government and non-government water specialists. The Chiefs of the Water Quality Branch in each of the regions and the Regional Directors of the Inland Waters Directorate were interviewed. In addition, water specialists from provincial governments, other federal departments, and non-government water research organizations were interviewed.

Perceptions of mandate

Most of those interviewed said that collecting and disseminating data and analysis on trends in water quality in areas of federal jurisdiction were the WQB's primary focus. Others mentioned the role of setting and providing advice on national water quality guidelines and objectives. A consensus appears to exist that more interpretation of water quality data is necessary to make the work of the Branch more relevant to departmental senior managers and the public.

Beyond these views there were several different emphases, including:

- the degree to which monitoring should be limited to areas within federal jurisdiction,
- the degree to which the Branch exists primarily to fulfill federal responsibilities under a number of specific programs or whether it serves a broader public role as the federal agency responsible for water quality,
- the extent to which more issue-oriented water quality research (e.g. acid rain studies) should be added to the Branch's generic monitoring programs,
- the degree of emphasis on long term water quality trends versus a multidisciplinary, ecosystem approach to water issues.

Several of the non-government water specialists interviewed said that as the Branch increasingly takes an "ecosystem" approach to water issues, its work will become more relevant to their activities.

Relationships with other agencies

Little uniformity exists across the country in relations between the Water Quality Branch and other federal agencies. But there is some variation in relations with other federal departments within the regions. A lack of clarity about specific roles often appears to reduce the possibility of cooperation. With only occasional exceptions, working relations with the provinces appear to be very good and have improved due to federal-provincial agreements, the decentralization of the IWD and common focal issues (e.g. Great Lakes pollution). Relationships often gel around specific issues. The nature of the relationship often varies, depending on the perception of resource commitment of the other level of government.

Several mentioned that decentralization had reduced contact and working relationships with the WQB headquarters, but none expressed a desire for a return to the earlier, more centralized structure.

Others noted that the WQB is often isolated and 'lost in the shuffle' within the IWD, Environment Canada and the government as a whole. They expressed a desire for a higher profile for the Branch within the Department.

Recipients of WQB research

Not surprisingly, the Department headed the list of recipients of WQB data and research, followed closely by other federal departments and the provinces. Universities and various interest groups were the next most important recipients. Many were concerned about the lack of success in communicating their research to the general public. This was the audience about which there was the greatest desire for improved communications.

Assessment of current communications

The five regions exhibited considerable differences in levels of communications activity, particularly with public audiences. One was not oriented towards public communications and viewed it as primarily a Headquarters responsibility. Those working on public communications were divided between focusing on broadly-based initiatives with the general public and networking with various stakeholders around specific issues.

A lack of resources to undertake new communications initiatives was a common concern. Some said a fear of intruding on the responsibilities of other departments (particularly around drinking water quality) or the provinces had limited the Branch's willingness and ability to make its data relevant to broader issues such as public health.

A number of barriers to communicating the activities of the Branch were mentioned frequently for the key audiences:

a) The general public. Many stated that because the Branch's raw data on water quality is of limited relevance to the general public, there has been an emphasis on scientific and technical reports rather than on more general water quality information. Several commented on the difficulty most scientists have in communicating simply to general audiences. Concern with inadequate resources (both financial and person-year) was mentioned by virtually all IWD/WQB interviewees.

Most support a high level of contact with the general public and would like efforts expanded.

- b) The Department. Branch Chiefs expressed concern with the Branch's limited profile within the IWD, the Department generally, and other federal departments was expressed by WQB managers. Several commented on the apparent inability for the Branch to grow beyond its traditional mandate functions.
- c) Non-government water specialists. According to nongovernment water specialists, the extent that Branch functions were based on traditional long-term water quality monitoring functions (rather than a broad "ecosystem" approach), reduces the potential for joint efforts and communications.

One respondent suggested that better access be created to WQB's data, but more were concerned with interpreting the data for use by others.

Water Quality Branch managers generally did not comment on their relationships with non-government water specialists.

Suggestions to improve communications

Nearly all IWD/WQB respondents mentioned the need to do more interpretive work on data. As one put it, "We tend to do water chemistry, not water quality". He suggested that the Branch focus more on providing the "So what?" of its data.

Publication of the analysis in report format is seen as the best method of disseminating research. Some suggested that scientists become better at communicating their research, others include a management overviews in all reports issued.

A number of those interviewed said that a redirection of resources from monitoring and data collection to interpretation and communications was essential to closing the gap.

The need for communications efforts targeted to school age children was mentioned more than any other. It is seen as an important ingredient in educating the public on the need to take personal responsibility for water quality. A number of comments were made about the effectiveness of Canadian Wildlife Service television PSAs and posters portraying particular Canadian wildlife species or Agriculture Canada spots on soil conservation.

Several respondents suggested a State of the Environment report on water.

Other suggestions include:

- working jointly with ENGOs to deliver water quality messages to the public,
- involvement in science fairs or essay contests,
- an Environmental Youth Forum (Parliament) during Environment Week,
- a Water (or Water Quality) Perspectives bulletin with contributions from experts in the field,
- more fact sheets, posters
- more press releases and media training,

Respondents felt that the choice of a regional or a national focus for WQB communications was dependent on the issue. Many issues are regional and require regional responses. Others, such as water quality guidelines and objectives, require a national focus.

Key water quality messages to the public

Several themes regarding messages to the public emerged out of the interviews. The one most frequently mentioned was the need for full disclosure of the state of water in Canada and for reporting on changes to water quality. Some felt that factual information was needed to respond to what they considered excessive concern about the safety of drinking water in the public.

A second theme was to help Canadians see the real value of water. Some said that the abundance of water in most parts of Canada made the public take it for granted. They said there is a need to understand that without good quality water, abundance is irrelevant.

A third theme follows from the second: Canadians need information and incentives to take personal responsibility for the quality of our water.

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