

# **Integrating Health Planning Into Watershed Planning**

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**A Report written for the Haliburton, Kawartha and Pine Ridge District Health Council  
through the Trent Centre for Community Based Education.**

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## INTRODUCTION

This report is written as a joint project between the Trent Centre for Community Based Education and the Haliburton, Kawartha and Pine Ridge District Health Council.

It is written and inspired by the HKPR DHC's "The Link", a report on the Healthy Environment – Healthy People Project, and follows one of its principal recommendations: that health planning be incorporated into watershed planning and management, and vice versa. (Vanderpost, Taylor and Buck, 1996) It is also recommended that criteria for health and watershed planning be developed, which reflects "the Link". The "Link" emphasizes the connection between our own health and the health of the environment in which we live. It also documents the concept of partnering of different agencies working for the communities in the Trent River watershed, in order to increase "knowledge and awareness of the relationship between human health and the natural environment." (Vanderpost, Taylor and Buck, 1996, 2)

The "Link" is the anchor for the following report, in which I will be documenting information collected through interviews with individuals from various agencies, and through reading their related documents.

This information is geared towards linking health planning into watershed management.

*Finally, if we are to shift the focus of the health care system from an illness system to a system that promotes health, we must include community planners and others in the community who can help us change the broader environment so that it supports health. (Health and Primary Health Care Task Force of the HKPR DHC, 1993, 6.)*

With this report I will document some of what is being done within our community to improve the quality of our physical environment, and then relate this to health.

The following questions will be addressed:

- How can we change people's ideas in order to put health and the environment on municipal agendas?
- How can we create an understanding of the importance of health planning in the way land is used and developed?
- What aspects of health planning pertain the most to watershed management?
- Where is work being done to create an understanding of health planning? Is work being done already to use it within land use planning? Where is this not being done?

Land use and Health planning tend to connect in the following areas:

Space for recreational activities; water quality; people having a healthy feeling about the amount of space around them; pesticide usage; transportation to medical facilities from newly developed/ rural areas, and flood control.

### **WHAT IS HEALTH PLANNING?**

To begin this report health planning should be defined and explained so that it is clear why and how it is seen as an important part of watershed and land use planning and for community planning.

Health planning is related to ecosystem planning. It is a concept which takes into account that the health of individuals has direct links to the health of the environment in which they live, and that therefore there is an important connection between health and the environment. It takes into consideration the interconnections within the environment,

seeing people as part of these connections. Health planning considers this connection and looks for ways in which health plays an important part in for example, land use planning. Health planning, for the purposes of this report, is based on the definition used by the HKPR DHC which came to recognize that **“health is indeed more than the absence of illness. Health is a state of well-being which is impacted by social, economic, environmental, spiritual, and emotional factors.”**(Health and Primary Health Care Task Force, 1993, 3) The Haliburton, Kawartha and Pine Ridge District Health Council, in its Health and Primary Health Care Review uses the following definitions of health, adopted from the World Health Organization's definition of health:

*“Health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity.”*

And

*“(Health is) the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs; and on the other hand, to change or cope with the environment. **Health is, therefore, seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resource, as well as physical capacity.**”*(Health and Primary Health Care Task Force, 1993, 2)

The relation of personal health to the physical environment, the economy and social factors is still a fairly foreign process to many people. This process emphasizes preventative action and planning, and in this way offers an alternative to short term planning. In incorporating personal health into a wider framework, personal health of the individual is not taken for granted until the point where a person gets sick, and has to restore health through health care professionals and/or hospitals.(Health and Primary Health Care Task Force, 1993)

*“Despite the environmental and health data that has been compiled, it has been underutilised in examining the relationship between health and environmental factors. Developing a knowledge base is, in itself, an important step in improving understanding and awareness of the relationship. However, it becomes equally important to then present the information in a way that is accessible, affordable and appropriate for individual citizens...”* (Vanderpost, Taylor, Buck, 1996, preface)

“it has become clear that there is very little in our daily lives which does not have consequences for our health and our ability to stay healthy”(Health and Primary Health Care Task Force, 1993, 34)

### **THE HEALTH DIVIDEND**

Planning for our individual health and well-being, and the health and well-being of our community in all aspects of community planning, whether it be land use planning, educational planning, the planning of social programs, is an important aspect of resource investment. Planning for health means making an investment in the future of the community and the future of every person who lives within that community. This kind of investment, that is resources which are being spent on providing basic needs such as, food, shelter, income, education, a stable eco-system, peace, social justice and equity, and sustainable resources (District Health Council’s Community Health Review Committee, CHRC, 1996), are investments which produce a health dividend.

The result of ignoring our health to the point of sickness can be expensive. “Investments in sustainable social, economic and **environmental development** can help us avoid such expenses and realize a health dividend.”(CHRC, 1996, 7)



Included in the Health Dividend Plan is a list of Health Goals. Among them are the following which relate directly to the connection between health and the environment. It states that to move the emphasis to health promotion and Disease Prevention (the community) must:

- Look at health as a valuable resource;
- Openly acknowledge the links between health and education and the social, physical, cultural and economic environments
- **work with planners, engineers and builders of our communities to ensure that the environment where we live is conducive to healthy living.**
- Ensure access to safe, clean and affordable recreational and green space areas
- Ensure that any planning for health must address the relationship between the manmade and the natural environment
- Understand and promote that by maintaining our physical environment today, the health of future generations will be improved.
- Encourage people to take a greater role in maintaining/sustaining the environment that is the physical, social, economic and spiritual environments.

As the Health Dividend Plan reports,

***“Health care services are an expense – a sometimes necessary expense, but an expense nonetheless. At any point in time, an individual’s or community’s health is determined by the quality of the surrounding physical environment and the vitality of the surrounding social and economic environments. Investments of time, money and resources that support these three environments (economic, social, physical) are the only things which can create health. If we make these investments, we will realize a “health dividend”. A health dividend is a return on these investments.”(CHRC, 1996,1)***

The things that keep people well go beyond the health care system.(CHRC, 1996,)

Income, social status, relationships with family and with friends, education, **and the state of the surrounding physical environment** implicate the health of a person and of a community.(CHRC, 1996) Essentially, there are three environments which correlate health and they are: economic, social and physical.(CHRC, 1996) The Health Dividend Report outlines core principles under each of these environments, all of which hold up the health dividend. The core principles for the physical environment, which relate directly to providing a health dividend are:

- The basic needs of clean water and healthy food, which cannot come from a polluted physical environment.
- The basic need of shelter must not be harmed by urban and rural development degrading the physical environment.
- The basic need of income cannot be provided healthfully if economic and industrial development is done in a manner which does harm to the physical environment in order to provide jobs.(CHRC, 1996)

In order to attain a health dividend, and to sustain health as a resource, it is necessary to shift the focus of health care from a place of repairing damage which has already been done to an individual's health, to a place of planning and preparing and preventing. This entails planning and designing communities which meet people's basic needs, thereby creating health; preparing a community which is conducive to health through programs and policies which increase awareness of the physical environment, and of health and wellness as integral in all that we do, and expanding beyond primary health care services such as hospitals and clinics. Through planning and preparing for health we obtain a more holistic outlook which works to prevent ill-health in the individual and within the community, thereby making "investments in sustainable social, economic and

environmental development”(CHRC, 1996, 7), helping to avoid health care related costs, and realizing a health dividend.(CHRC, 1996)

Doing preventative planning work for a healthy environment inevitably offers positive implications for positive and preventative health planning. This is why sustainable development and conservation of the environment (CHRC, 1996) are one of five preconditions outlined within the Health Dividend Report which must exist to optimize the health of the population and simultaneously the allotment of resources on health.(CHRC, 1996)

### **THE CONCEPT OF WATERSHED PLANNING**

The other aspect of this report deals with watershed management and planning.

Watershed planning is a fairly recent concept adopted by municipal land use planners.

One of the fundamental principles of watershed planning is the ecosystem approach, which takes into consideration the interconnections in the environment. A watershed is a natural geographic unit describing the drainage area of a river.(M.N.R, 1993) I will further explain this later on in the report. The watershed is an environment which often stretches over many municipal boundaries, since rivers and streams are also shared by several municipalities.

*“Watershed planning today is what recycling was yesterday. It calls for a whole new approach to life. It is a reflection of our understanding that we live in a world of finite resources, one of the most precious of which is water.”* (Peter Beeman, Councillor, Township of Kingston and Chair, Collins Watershed Committee)

*“Traditionally, human activities have been managed on a piecemeal basis, treating the economy separately from social issues or the environment. But the ecosystem concept holds that these are inter-related, that decisions made in one area affect*

*all the others. To deal effectively with the environmental problems in any ecosystem requires a holistic or 'ecosystem' approach to managing human activities."*(Watershed, 1990)

The watershed concept emphasizes that activities done in one part of the watershed affect the watershed as a whole. Watershed planning offers a way for managing the growth of regions in concert with the environment. It is said that this type of management could save \$55 million a year.(Municipal Watershed Planner,p.6)

Conservation Authorities, including the Otonabee Conservation (as of to winter of 1998 the Otonabee Regional Conservation Authority became the Otonabee Conservation), have been increasingly basing their water and related land management reports on watershed planning. Through its Water and Related Land Management program the Otonabee Conservation manages the water resources for the Otonabee Region watershed "for the purpose of preventing, reducing, or eliminating the hazards to life and property caused by flooding and erosion, and promoting the wise use of water related resources."(ORCA, 1989) In planning to eliminate hazards to life through flood control, identifying areas vulnerable to flood damage, the Conservation is planning for health, and contributing to a health dividend.

The Conservation also does the work of putting together watershed and subwatershed plans, contributing to resource planning for the Watershed region. Through these plans the Conservation maintains a relationship with planning and development agencies and comments on "official plans and amendment, zoning by-laws, subdivisions and severances"(ORCA, 1989) Satisfactorily completed watershed and sub-watershed plans are submitted to the local municipality, which decides whether or not to adopt the plan.

“The key municipal planning document is the official plan. And it is in there that the link will be made. When the gist of the watershed plan forms part of the official plan, the process will be truly integrated land use planning.”(M.N.R, 1993)

#### The Integrating Water Management Objectives into Municipal Planning Documents

booklet, put out by the Ministries of Energy and Environment and of Natural Resources outlines general types of policies which a municipality should consider in formulating its Official Plan. It examines the importance of using watershed planning in land use management and outlines policies which can be incorporated into the official plan of municipalities in order to do so. Its executive summary states that,

“Water and related resources are a matter of provincial significance because they are essential elements of our natural ecosystem. They sustain human, plant and animal life, and are important for agriculture, recreation, industry, energy production, domestic purposes, among a myriad of uses. A reliable supply of clean water is fundamental to our economic as well as social and individual well-being.”

This statement recognizes the link between clean water and personal health, to the extent of encouraging municipal planners to formally acknowledge this link within their official planning policies. With this link formally acknowledged, health planning becomes a natural accompaniment to watershed planning.

#### **THE WATERSHED**

A watershed is a natural area linking together water, land and life. It is defined by the movements of both surface water and ground water. Water flowing through the watershed generally leaves from the same point, like the mouth of a river. Surface water moves overland, while water which sinks into the ground becomes groundwater and then

returns to the surface in springs or discharge areas. Water moves both below and above the surface of the land. (Fishermen Involved in Saving Habitat (F.I.S.H.), The Watershed Report Card Development Committee, 1997)

Soil and rock, arranged into valleys and hills determine the boundaries of the watershed, and water pathways are affected by the entire landscape. The water moves and along with the pathways through which it travels it is constantly interacting with the life and land in its environment. (F.I.S.H., 1997)

Communities of plants and animals gather in the watershed and adapt to the kind of land the ways that water is distributed within their watershed. Plant communities in particular also influence the flow and quality of water and the amount of impact that it has on the land. (F.I.S.H., 1997)

*“Finally, all people live, work and play within watersheds, and so are a part of them as well. These land uses reflect the values they hold for the watershed, and affect, and are affected by, the interactions of land, water and life described above....*

***By examining the effects that these land uses have on the balance and natural functions of the watershed, we can act to ensure the long-term health of our watersheds and ourselves.”*** (F.I.S.H., 1997, 3)

### **HOW AND WHY DOES HEALTH PLANNING FIT INTO WATERSHED PLANNING?**

According to Dawn Berry Merriam, from the HKPR DHC, agencies such as the Otonabee Conservation should be/can be/ seen as contributing members of the primary health care system.

Watershed planning takes into consideration the health of the environment, and the ecosystem. Watershed planning sees natural areas such as rivers, streams as important aspects of the environment which are connected to and affect the land and the people who

inhabit it intimately. Watershed planning encourages planning for a healthy environment. According to the definition of health previously described, environmental health is a factor which significantly affects personal health.

Watershed planning deals with health in such ways as: water quality, and planning to avoid developments in flood zones. As Brian Dowdell points out:

*“The watershed approach is extremely important to our municipality for two reasons. First is the quality of life that our township residents expect, and second is the very important protection of tax revenues that go along with a healthy watershed environment”* ( The Municipal Watershed Planner, 2)

Ecosystem planning, from this perspective, becomes critical.

*“When ecosystem considerations are integrated into the planning process, it is more likely that land use decisions will not jeopardize ecosystem and human health. An ecosystem approach can result in economic savings by avoiding the need for costly and difficult remedial actions. It places emphasis on early guidance and input into decisions on land use changes.”*(MOEE,MNR, 1993, 4)

Watershed planning emphasizes planning for land use activities in order to prevent costly damage to the physical environment. It takes into consideration the fact that this also prevents damaging human health. Watershed planning can help us to attain a health dividend.

Watershed planning also means connecting all agencies which play a part in community plans together in decision making processes which may affect the watershed.

Communication is important as it leads to co-ordinated community planning. In this way, all agencies involved in community development will ideally be considering where and how they are affecting one another. This type of communication best reflects a holistic, eco-system approach to planning which reflects the nature of a watershed.

Watershed planning shifts our focus onto the natural environment and the important resources, such as water, which sustain our well-being in many ways. As we as a community increase our knowledge about the watershed we are directly increasing our knowledge about ourselves as parts of the watershed and the natural environment. The more that we do this, the more that our personal and communal health is connected to the health of our physical environment.

**Just as the environment is a complex system, so too is our health.**

The following report details examples of watershed planning which includes health planning as well as studies where the link between watershed and health planning is not being made. This report will explain why this is occurring and where it is occurring, and offer recommendations for furthering the integration of health and watershed planning, therefore further making the link between health and the environment.

**INTERVIEW WITH DAN WHYTE FROM THE OTONABEE  
CONSERVATION:**

There are two kinds of planning processes: the large watershed plan, and the subwatershed plan. According to Dan Whyte, watershed planning is a more public planning process. It means getting the community involved in watershed awareness and in issues which affect the watershed. The subwatershed plan is a more magnified type of report and tends to offer limited success in getting the public involved.

Developing a watershed approach to land use really has involved and is still involving a “paradigm shift” (for planning and development related agencies, such as municipal planners.) It means shifting the emphasis of planning from economic development to a



more holistic outlook which includes both health and the environment along with the economy of the area. This has not been an easy shift to make, and according to Dan Whyte, the economy still seems to rule decisions about land usage right now.

Dan Whyte describes watershed planning as pro-active. The Conservation follows the watershed philosophy which believes that what affects upstream, affects downstream. There has been some resistance in spreading this approach to land use planning as the Conservation has had to get municipalities which share the watershed area to agree on the recommendations made in their report. Different municipalities sometimes have conflicting views. *The Conservation takes the plans of developers and tries to develop them into plans which also take care for nature's needs.*

According to Dan Whyte, barriers to considering health and the environment derive from an outlook which puts the economy above any of the community's other needs. This means putting economic health in a category which is separate from the physical, and social, health of the community. With economic health as the primary consideration for the community we continue to mould the environment to our economic needs in order to create jobs. Job creation tends to speak the loudest when it comes to decisions about land use and community development.

One recommendation emerging out of this interview is **the need to demonstrate to the public the benefits of expanding our economic concerns to include environmental and social concerns, and to show that they must all relate to one another, if we are to truly create a balance within the community.** There is a need to show that planning which considers environmental and health concerns contributes in an important way to economic health. This brings us back to the Health Dividend discussed earlier,

and reminds us that “Investments in sustainable social, economic and environmental development can help us avoid (such) expenses and realize a health dividend.”(CHRC, 1996, 7)

If we plan, therefore, in a way that takes into consideration the environmental needs of a Community, based on its watershed area, for example, we are also planning for the health of the individuals within that community. This is preventative action.

## **INITIATIVES TO IMPROVE THE HEALTH OF THE ENVIRONMENT**

### **THE WATERSHED REPORT CARD**

There is a need to increase awareness among the public about the watershed, and watershed planning issues. With increased community awareness regarding the watershed concept, comes increased support for watershed planning and appreciation for the natural environment, and its resources, such as water, which sustain our well-being in an integral manner.

A project which is being initiated through the Ministry of Natural Resources and which is relevant to this need is the Watershed Report Card. This program is designed to introduce individuals to the concept that the watershed is heavily linked to itself, meaning, that activities in one area of the watershed implicate the entire watershed.

There is nothing that occurs in isolation.(FISH, 1997, 77)

This is described by Emma Taylor, one of the individuals working on the project, as an initiative which has the “aim and potential of raising awareness in the community about the Watershed.” It is “a user-friendly tool for community groups and allows for them to

assess the watershed. It offers rehabilitation programs and deals with human relationships with the watershed.”

Emma Taylor commented that there is more interaction and increased communication occurring between agencies relating to planning. According to her there are increasing partnerships being made as well as more linkages. There is in line with these the realization that linkages are “necessary in order for agencies to provide quality living to the community.”

“Where for example, before, the city or county might set up a zone for commercial use and it in fact was a flood zone or something this caused a problem. This kind of thing isn’t really happening now though.”(Emma Taylor, M.N.R.)

Hopefully if it is successful, this project will aid in making the watershed a public concern, and will turn around the tendency to take it for granted.

*“Just like healthy humans, stable water systems have a certain amount of resilience; however, there is only so much stress that any one system (whether it be human or natural) can withstand.”(FISH, 1997, 77)*

The Watershed Report Card initiative helps us to understand what the watershed is and how we fit into it. It makes the concept of the watershed more accessible to the community. As we gain more knowledge and understanding about the watershed, we are able to attribute greater meaning to the land and water which surround us. Increased meaning can add value to our physical environment. As we learn how we too are a part of this environment, living within an ecosystem, there is potential as well to increase the value of our own individual lives, and the care with which we act upon the environment. Learning about the watershed, and the natural environment, ultimately leads to learning about our selves.

**We must remember, that work done to protect our physical environment can be counted as work done to improve our individual health and our community's health.**

#### THE ENVIRONMENTAL FARM PLAN AND BEST MANAGEMENT PRACTICES

The Ministry of Agriculture's Farm Plan provides farmers with a step by step procedure in order to audit their farm in terms of environmental safety. According to Chuck Lamers at the Ministry of Agriculture, farmers are then encouraged to develop a plan to prevent accidents which may cause environmental damage, such as chemical spills. As an incentive, farmers can receive grants of \$1500.00 to set up preventative practices for their farm.

The Best Management Practices program takes into consideration the impacts that farmland and farm practices have on the natural resources that are shared in the community, resources such as water for example. Best Management Practices manuals outline expected management styles for the farm community. For example, effective manure application. "too much manure can lead to poor crop performance, and water pollution"(Ministry of Agriculture, 4) This takes into consideration the effects that farm management practices have on the environment, and makes an effort to reduce negative environmental effects. In the case of manure, they recognize that its use comes with some risks, which include the possible pollution of waterways with bacteria from manure run-off, as well as leaching of excess nutrients into groundwater due to over-application of manure on crops.

These are examples of preventative programs taking place to guard the quality of an environmental resource, water, which is important in determining the health of the individuals who use it. Health and the environment are directly linked.

#### PETERBOROUGH COUNTY STEWARDSHIP COUNCIL

The Peterborough County Stewardship Council is a fairly recent program inaugurated in January 1997. The Council is made up of ten landowners and three resource management agency representatives. (McLean and Armstrong, 1997) The Council is supported by the Ministry of Natural Resources, and represents 25 organisations.

The Council promotes stewardship of the Peterborough County's natural resources. The key goal is to promote the sustainable use of soil, water, woodlands, wetlands and wildlife in order to help private landowners make the most out of the environmental, recreational and economic potential of the properties they own. (McLean and Armstrong, 1997) The basis of the project is "people helping people help themselves." (McLean and Armstrong, 1997, 3) As Stewards they encourage emphasis on the "long term values of the land base" (Duncan Armstrong, Project Supervisor)

Duncan Armstrong, Project Supervisor describes the program as "eco-centric, not ego-centric."

In line with its goal, the Council conducted a community survey in order to better understand the concerns of Peterborough County's private landowners. Survey respondents identified clean drinking water and the enhancement of habitat for wildlife as the top two out of five resource management interests. Duncan Armstrong pointed out that high levels of nitrates and phosphates from animal waste and over-fertilization pose a real threat in South-Western Ontario. In terms of health too many of these elements in

the blood system inhibits the transfer of oxygen from the lungs to the rest of the body.

This negatively affects the health of livestock as well as human health.

As a result of such information gathered in the survey, the Council is doing initiatives to help with ground water and surface water issues. One such initiative was a Clean Water exhibit which they organized and presented at the Peterborough Farm Show this year.

The Stewardship Council is doing work which promotes issues pertinent to the health of the watershed and the people and wildlife who inhabit it, focussing on privately owned land.

The Stewardship Council is also teaching people about the property which they own so that it may be preserved for the future. It teaches landowners that "if they manage their land well, the land becomes more valuable economically and socially."(Duncan Armstrong) It is teaching people to "see themselves as integral parts of the property they own, for example through gardening, recreation, or a place to relax and unwind"(Duncan Armstrong) The Stewardship Council is giving people the tools to increase the economic success of their land within a sustainable frame-work. This promotes a healthy mentality for landowners, and promotes interacting with the land's natural resources in a manner which benefits the eco-system.

The Stewardship Council also strongly promotes sharing its information with other agencies and groups within the community. "In this way, the community as a whole, can become more aware of the importance of supporting the wise use or stewardship of private lands."(Armstrong and Mc Lean, 1997, 1)

Duncan Armstrong: "Our job is to facilitate different groups to work together. Our obligations are not so much to ourselves as they are to community mandates. The more people who are informed about the Stewardship Council's ideas the better."

“There are a lot of people out there doing equally great things.”

In sharing information, the Council is encouraging linkages within the community and improves co-ordination as well as awareness about watershed and health issues which affect us all.

Duncan Armstrong stated that he is very aware of the connection between the natural environment and human health, and understands that there is a strong relationship between natural communities and the health of the human population. Although the Stewardship Council’s focus has to follow the Ministry of Natural Resources’ core mandate and zone in on fish and wildlife habitat, “the spin-offs are very large.” For example, if water quality is improved, this improves fish and wild-life habitat, as well s human habitat and health.

“If we’re fixing one, we’re indirectly fixing another.”

## HEALTH AND THE ENVIRONMENT IN CITY AND COUNTY PLANNING

### City Planning

Kevin Duguay, city planner for Peterborough, describes the city planner’s function as to to advance the function and planning of the city. He emphasized that the city is a dichotomy in that it is an urban environment, with pavement, roads, noise, yet it is also part of a natural environment, and that urban development procedures have to be considerate of Natural Areas. A city is “urban but natural.” He also stated that “urban development procedures have to be considerate of natural areas.”(Duguay,1998.) The job

of planners, he said, is to listen to the community and then go back to the official plan to make amendments. They also have to ensure that the official plan takes place.

City Planning Environmental Initiatives:

ACTION:

ENVIRONMENTAL AND HEALTH IMPLICATIONS:

<p>1. Planning has been making a concerted effort to reserve, conserve the Jackson Creek corridor, thereby following recommendations of the Otonabee Conservation's watershed report. Also encouraging public activity around the creek in order to take advantage of it as a pleasurable natural feature of the city's environment.</p>	<p>-has the potential to protect the Jackson Creek corridor from pollution -promotes recreational appreciation of the Creek's corridor – a place for people to unwind.</p>
<p>2. Making plans to improve the use of the waterfront through, for example increasing pedestrian use by making walking trails like connecting the waterfront marina to the Hunter St. Bridge</p>	<p>-promotes appreciation for the waterfront -promotes outdoor physical activity -promotes making space in the city for the natural environment</p>
<p>3. Re-thought a Harper Park development in order to conserve fish species which would have been damaged</p>	<p>-protects valuable life-forms from harm</p>
<p>4. Recently done more work with pedestrian and bike trails</p>	<p>-this promotes use of alternative modes of transportation, which helps to decrease car usage and related noise and air pollution. - this also encourages physical activities, enjoyment of the outdoor environment, recreational activities.</p>
<p>5. Have to consider flood zones, ground water, hydro-geological flows</p>	<p>-protects water quality -protects people and property from flood damage</p>
<p>6. Sewage capacity is carefully monitored in order not to overcommit sewage treatment capacity</p>	<p>- this protects Peterborough residents from poor drinking water which could negatively affect health.</p>
<p>7. Planning to integrate some of the objectives of the Natural Areas strategy into the official plan</p>	<p>- increased public greenspace and therefore increased protected natural areas, in and around the city - more potential for outdoor recreation and</p>



	appreciation - more places to get away from the noise and busy-ness of the city
8. Tree preservation by-law which disallows clearcutting	- promotes the conservation of natural resources - trees provide cool, shady areas in the summertime. - prevents soil erosion, which protects water quality as clear-cutting affects the quality of groundwater.

According to Mr. Duguay, the city works regularly with the county but has no committee shared with the county.

When someone wants to make an area commercial, they take their proposal to the city which takes it to the Otonabee Conservation, and other various agencies who come together to form a decision about the request. According to Duguay there is communication occurring among agencies within the Peterborough community.

#### Natural Areas Strategy

The Peterborough Natural Areas Strategy is a report which has proposed a network of natural areas, that is, a system which links up Peterborough's natural areas. It also recommends ways of protecting such a network. (Steering Committee, Peterborough Natural Areas Strategy, 1996) Creating a natural areas system encourages recreational use and appreciation of the natural environment by offering additional places for activities such as walking, cycling and skiing, and also by providing more space for wildlife habitat to move and breed, thereby maintaining biological diversity. (Steering Committee Peterborough Natural Areas Strategy, 1996)

### County Planning

County Planner Iain Mudd described the county planning system as a two tier system with local municipalities occupying the first tier and the county in the second tier. The County is responsible for the planning of primarily rural areas, while the city takes care of urban planning for the city of Peterborough. The city and the county are two separate planning bodies. Municipal plans project for the next 20 years, and must be updated every 5 years.

The county connects with various agencies such as school boards, the Otonabee Conservation, the Health Unit, and puts its various comments together and then gives the agreed-upon requirements to interested developers.

### Environmental Initiatives in county planning:

#### ACTION:

#### ENVIRONMENTAL AND HEALTH IMPLICATIONS:

1. Moving away from strip development along water and shorelines and promoting cluster development.	-leaves more open space and common space along the water. -opportunity for the residents to enjoy the waterfront, use the space for recreational and stress relieving activities.
2. Working to promote a 15 metre off – shoreline rule for construction and development.	-helps to protect fish habitat
3. Under the municipal planning act for this area, when developers purchase land, they must designate 5% for park purposes, or pay the municipality an equivalent sum in money. The municipality is supposed to put this cash towards the acquisition and development of Recreation space, open space and park lands.	-this provides community members with space to participate in recreational activities, out-door activities, fitness, all of which contribute to well-ness. -also this provides space for the natural environment to be conserved.
4. Hydro geological studies are undertaken and consulted at the County level. This is done to ensure that water is drinkable and safe. If the nitrate levels are too high,	-directly considers health through the quality of the water which people use for their every-day activities; drinking, washing, cooking.

development can be prevented. If sodium levels are too high in the water, then the developer must build a water treatment system of some sort.	- prevents illnesses which may be caused by poor water quality, such as "blue-blood syndrome", caused by too many nitrates and phosphates.
5. Licenses for the extraction of aggregate which are located close to residential areas can only be granted if they can show that noise and dust will be sufficiently restricted so as not to negatively affect surrounding housing area.	-preventing inhabitants from excessive noise and dust lowers the negative impact these factors can have on the health of individuals, by preserving air quality and environmental noise quality.
6. Land fill site development studies must demonstrate that the development will not harm water quality in order for the land fill site to be eligible.	-preventing negative health impacts on life-forms which use water as a resource for living.
7. The county consults the Otonabee Conservation regarding natural hazards for flooding. Developers have to demonstrate that if a flood occurs, people can get out.	-directly considers the health and safety of people living within the vicinity of the proposed development.

## **BARRIERS TO HEALTHY ENVIRONMENT INITIATIVES**

### **PROVINCIAL DOWN-LOADING**

Within the last five years, there have been major changes in Planning, beginning mainly at the provincial level, and inevitably trickling down to the municipal levels.

When in power the NDP came out, with a set of new provincial policies – a very rigid and comprehensive set of policy statements on economic development, wetlands, community development, for example. There were within these statements, very few grey areas. According to Iain Mudd, the NDP government gave a "broad brush over the entire province."(Mudd, 1998)

When the present Conservative government came in a few years ago, they almost immediately repealed this entire, very large and very comprehensive document, replacing it with a thin document with few specified guidelines. The NDP Planning document was

repealed as it was considered too stringent for the development policies of the Conservative government. The Conservatives intent was and still is, to place emphasis on development.

While the previous planning document had guidelines, for example, which prevented development from occurring within 100 feet of wetlands, the present document has no such guidelines, thereby leaving the decision making up to individual county planners.(Mudd,1998)

As Iain Mudd pointed out, the problem here is that this potentially leaves more room for political interference. Planners interested in sustainable land use which takes into consideration the needs of natural areas have increased responsibility and “must develop thick-skin, as they are the road block” in situations where municipal politicians “often don’t see problems with development .”(Mudd, 1998)

In the planning process for municipalities, politicians are the ultimate approval authorities. The county meets with new councillors in order to educate them with regards to the responsibilities and authority of county planners. However, although planners may promote development which takes into consideration environmental conservation practices and considerate land use-age, ultimately politicians make the final decisions about how and where development occurs. Without clear provincial guidelines there is more potential for economic development to overtake environmental and health concerns in the use and management of land.

#### PROVINCIAL CUTS:

According to the Environmental Law Association, much of the present provincial government’s actions relating to environmental programs and environmental

responsibilities have been carried through both without enough public participation and without sufficient assessment of potential environmental affects. By dismantling Environmental Laws, the Ontario Government puts all aspects of environmental protection at risk. This includes controls on air pollution, water pollution, pesticides, waste disposal, and biodiversity protection. All have important impacts on the health of the watershed, and those who live within it. They report that there has also been very little enforcement of environmental standards and no commitment in assisting and supervising municipalities and the private sector who are now more responsible for delivering environmental protection. This relates directly to the problems being experienced at the County planning level. In its April 1997 Annual Report to the Legislature, C.E.L.A writes: "If we continue along this path, our right to a healthy environment will be jeopardized."(Environmental Law Association, 1997, 2)

#### The C.U.R.B program

The C.U.R.B program was a joint initiative between the Ontario Ministry of Environment and Energy and the then titled, Otonabee Conservation Authority. The Otonabee Conservation became involved in it in 1986. It began out of concern over water quality in the Indian River Watershed, where a study determined that there was an increasing number of beach closures, and that action needed to be taken in order to cleanup this watershed.

The Indian River C.U.R.B plan (Clean Up Rural Beaches) and later the Rice Lake C.U.R.B. plan both identified cattle access as the largest agricultural contributor of bacterial contamination in the two watersheds.(OMEE, ORCA, 1996)

Malfunctioning sewage disposal systems which surrounded the lake were identified as the largest contributor of bacterial contamination in Rice Lake.(OMEE, ORCA, 1996)

The plan was begun out of concern over an increase in the frequency of beach closure days in the province. It identified priority contributors of bacterial contamination in rural watercourses and then offered financial and technical assistance to begin projects to reduce and/or eliminate these identified sources. As a result, annual beach closure days province wide, dropped dramatically.

The C.U.R.B program also promoted itself in the community, and educated rural residents “on the subject of rural water quality issues and concerns.”(OMEE, ORCA, 1996, 8) Part of the promotional activities was a Water Quality Awareness Week in August of 1995, presented on CHEX Television. Projects which were part of the program were reported upon and made known to the public.

It also included an incentive program which provided financial assistance to landowners who undertook capital projects in order to reduce “surface water pollution”(OMEE, ORCA, 1996,1)

Such capital projects included: “septic system improvements, restriction of livestock from watercourses and the provision of alternate water sources, manure storage and barnyard run off containment, and storage or treatment of milk house wastes.”(OMEE, ORCA, 1996, 2)

Although this program was considered successful both in eliminating contamination from rivers within the watersheds implicated and in spreading awareness about water quality issues, it was discontinued in 1995 due to lack of funding. In the words of an O.M.E.E. employee, “Oh! That’d Dead.”

Although some of these projects are being continued today in the form of the Ministry of Agriculture's Best Farm Practices program, others such as the "restriction of cattle from watercourses" have been left in the dust. The emphasis that the CURB program placed on water quality is also no longer around.

*"Water quality is an important environmental issue in our communities. The C.U.R.B. Program will help ensure that the environmental health and recreational potential of our lakes and rivers remains as good or even better in the future than it is today. The link between a healthy environment and healthy people cannot be underestimated."*(OMEE, ORCA, 1996, 7)

With the discontinuation of such programs as C.U.R.B, provincial emphasis on the environment dwindles. As environmental emphasis decreases, so too does the potential to realize a health dividend which recognizes health along with the environment as important resources for our everyday life.

#### THE LOSS OF THE HALIBURTON, KAWARTHA AND PINE RIDGE DISTRICT HEALTH COUNCIL

In September 1997, the Ministry of Health announced that the Haliburton, Kawartha and Pine Ridge District Health Council would be amalgamating with the Durham Region District Health Council. Although the HKPR District Health Council had a large amount of community support for preserving its planning culture which is geared towards community development, the Ministry went ahead with the merge. There is concern that this could impede the continuation of the community focused direction which the HKPR council in this region has taken. With a larger Health council the concerns and interests of the community may not be as easily considered as before.

With the loss of the HKPR DHC, consciousness raised through documents such as the "Link" and the Health Dividend Report which connected health with the environment, may diminish. Without continued promotion of the consciousness of the relationship that our physical environment has upon our health, the implementation of health planning into watershed planning will be impeded.



## **COMMENTS FROM MEMBERS OF THE TRENT RIVER WATERSHED**

The following quotes reflect the concerns of members of our watershed, as well as many of the issues developed in this report. These comments have been taken from The Link report (23-26), and reflect their perceptions of health and its relationship to the environment.

*“As a citizen, I am appalled at the lack of an integrated analysis around Environment and Health by our elected officials, municipally, federally, provincially. The result is slowly killing us.”*

(Linda Slavin, City of Peterborough)

*“I believe a healthy community is a collection of healthy people where a balance of the physical, emotional, intellectual and spiritual needs of the individual are in balance. The state of the environment affects my overall health, access to natural areas for hiking and cross country skiing is restorative and a great tool in helping me deal with stress.”*

(Astrid Hudson, Town of Cobourg)

*“A healthy community is one which can operate within its own ecosystem efficiently, recycling the fruits of the land with minimal to no adverse effect to the surrounding areas. For example, proper waste management can reduce the contamination to surface water and subsurface water which impacts upon the quality of the local and surrounding ecosystem(s).”*

(M. Ouellet, Town of Lindsay)

*“Through education our community must be made to understand that health care costs can be dramatically reduced by individuals taking responsibility for what they eat drink and otherwise do to their bodies. Economic activity which creates unacceptable environmental costs (which in turn cause disease) must be exposed.”*

(John Wadland, City of Peterborough)

*“Pollution caused by emissions from cars causes breathing difficulty and prevents my access to some places on occasion. Neighbours who spray chemicals on their lawns force me indoors.”*

(Evylin Stoud, Town of Bowmanville)

**CONCLUSIONS;**

It is clear that in order to attain a health dividend, health must be linked to the physical environment. Integrating health planning into watershed planning is a clear way of accomplishing this link.

In order for this to occur, there needs to be an increased public awareness about the watershed and issues pertaining to it. There also needs to be inter-connected communication occurring between agencies and groups within the community who play a role in its planning, so that they are aware of how their individual initiatives and decisions are affecting one another and the community as a whole. In this way, economic activities are not isolated from social, environmental and health initiatives. Together they form a whole.

There are presently projects being undertaken to promote this sort of communication within the community, as well as awareness about the watershed, the natural environment in which we live, and the issues that affect us and the environment, thereby contributing to human as well as ecological health.

However, there are also barriers which impede the linking of health with the environment, and therefore to developing a more holistic approach to community planning. Without sufficient provincial focus on the environment, there are not enough resources made available for health and the environment to be linked and implemented into planning for the community. One major problem, especially within governmental decision-making, is that nobody is talking about environment. If nobody is talking about the environment, then there is crucial dialogue missing in relation to the health and well-being of individuals and communities.

**RECOMMENDATIONS:**

1. That planning between groups, and agencies within the community be communicative, and connected to one another.
2. That a local health and environment planning table be established, following along the lines of the GP 20/20 REPORT, which states as one of its Environment related recommendations:

*The numerous environmental and natural resources management agencies, non-governmental organizations and educational institutions be co-ordinated in order that these groups work together to develop and implement a strategy to improve our region's surface and ground water quality. (26)*

The Otonabee Conservation could be in a position to lead this.

3. That a provincial planning table for health and the environment also be established.
4. That the new District Health Council look at planning with environmental groups to ensure the health of the community.
5. That partnerships be formed with Trent University's Bioregionalism and Environmental Studies department, and it be ensured that they are on the local planning table for health and the environment.
6. Ensure that the new District Health Council continues along the lines of Community Development and the Health Dividend Plan and the Link Report.

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