Fraser Basin Council

STATE OF THE BASIN ADDRESS

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Presented by

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Welcome to the Fraser Basin's Council's
State of the Fraser Basin Conference.

First I want to thank you all for being here.
You are here because the health of the Fraser River Basin is important to you and, because you and other people do care we will make a difference to our collective future. You will hear that we already are making a difference. And you will hear what remains to be done.

Before I thank our conference sponsors, I want to remind all of us of the Council's source of core funding – the funding that permits the Council to operate day-by-day and year-to-year. In equal measure our core funding comes from the Basin's local governments, the provincial government, and the federal government. Our thanks for this support, and for the time and advice so generously given by government officials, and by members of our First Nations' communities.

It now gives me great pleasure to recognize the Platinum, Gold, Silver and Bronze sponsors of this Conference:
Platinum: Ministry of Sustainable Resource Management. Our lead sponsor, and the Minister Stan Hagen, and the Deputy Minister, Jon O'Riordan, give us tremendous support and advice – but never explicit instructions!

Gold: Alcan, which has also been a corporate sponsor of previous State of the Fraser Basin conferences.

Silver: VanCity Savings Credit Union, and Canadian Heritage

Bronze: BC Gas; Western Economic Diversification Canada; National Round Table on the Environment and the Economy; Municipal Finance Authority; three BC Ministries: Community, Aboriginal and Women's Services; Health Planning; and Water, Land and Air Protection; the Vancouver International Airport Authority; Greater Vancouver Regional District; and Public Works and Government Services Canada.

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And support from the Vancouver Foundation, toward our indicators research and production of the State of the Fraser Basin Report, is greatly appreciated. And a new gift, confirmed yesterday by the Lohn Foundation, will provide three years of support services for Council Directors.

Two years ago, the Honourable Iona Campagnolo, then my predecessor as Chair of the Fraser Basin Council, and now the Lieutenant -Governor of British Columbia, delivered her State of the Basin address.

At the very end of Her Honour's speech, she called on the Council to develop sustainability indicators for the Basin – markers that would enable us, over time, to more accurately report on the State of Sustainability in the Fraser Basin.

I am very pleased to report to you that the Council has taken a major first step towards the daunting challenge of measuring progress toward a sustainable future. Today, I have the privilege and pleasure of presenting to you, and to all British Columbians, our first ***State of the Fraser Basin Report: A Snapshot on Sustainability*.**

I cannot overstate the importance of having a way to measure how well we are progressing towards sustainability. Having the capacity to accurately gauge where we stand is crucial. As Roy Mussell reminds us, "what gets measured gets done."

Let's examine what sustainability actually means. The Council believes that sustainability represents the common sense actions we must take to ensure our children's future. We believe we can build a healthy future if we create better ways of living and doing business; ways that integrate economic, environmental and social aspirations. It is "An economy and way of life in which both people and nature are thriving."[1]

Sustainability talks about change, and rejects the status quo. It integrates three core components – the economy, the environment, and community - and it advances intergenerational equity. Sustainability requires that we all work together to find the common ground upon which constructive solutions will be crafted.

Before I get into our Basin's indicators, I want to share with you what I think makes the Fraser Basin so special.

First, it's a big place.
All of Great Britain – almost all of California – could easily fit into the quarter of British Columbia that the Basin occupies. Yet the Basin is home to just 2.6 million people, compared to nearly 60 million in Great Britain and 30 million in California. Lots of room overall, but the majority of our Basin's 2.6 million residents live here in the Lower Mainland.

The Basin produces 80% of BC's and 10% of Canada's economic output. The Basin accounts for almost 80 percent of BC's farm income. Its farms, ranches and orchards comprise half of BC's agricultural lands. The Fraser Valley is one of the most productive agricultural regions in Canada, supplying food for us and many others. We are a very productive place.

Our forest ecosystems cover about 75% of the Basin and support one of our biggest industries. We have eight major producing mines. The Fraser Basin also has some of the world's most spectacular scenery and outdoor recreation opportunities.

The Fraser River is one of the world's greatest salmon-producing river systems. It supports five different salmon species, as well as 65 other species of fish, including steelhead and sturgeon. We are blessed with abundant natural wealth.

The Fraser Basin is recognized internationally for the diversity and abundance of its waterfowl, with some 21 species that nest here. It hosts the largest wintering population in Canada, including the once-threatened Trumpeter Swan**.** The Fraser River estuary is a crucial staging area on the Pacific Flyway for massive flights of migratory birds. It is a haven for wildlife.

All these things contribute to the Fraser Basin's enduring appeal.

The aboriginal peoples of the Basin were the first to recognize the special nature of the Basin when they settled here – thousands of years ago. Over the years, people from all over the world have come here to live, work and play. In Vancouver alone, 70 different languages are spoken. Our Basin welcomes the world.

These are just some bare facts of what makes the Fraser Basin a special place. But these facts hardly convey the power, the beauty, and the passion it inspires.

Come with me on a quick tour down the Fraser River, through the Basin, and you will get a sense of its grandeur. Both the river and the Basin sing BC's motto: *Splendor Sine Occasu*. Splendor without diminishment!

From the Rockies to Richmond, the Fraser runs 1,377 km, or 750 miles. It's Canada's fifth longest river – and a Canadian Heritage River. Thirteen major and countless minor tributaries feed the Fraser as it passes through five dramatic climatic zones.

From alpine tundra …
…. and lodge pole pine forests…
…. to grasslands and dry and vast canyons …
…. through old growth rain forest …
… and a lush, lowland valley.

The Mighty Fraser River drains a Basin that is unsurpassed in natural grandeur, human diversity and economic opportunities.

I treasure the Fraser Basin's diversity of people and enterprise. Its spectacular natural assets. Its staggering natural beauty. And, most of all, its potential for preserving and protecting, for future generations, what much of the world has already lost. We would not trade this Basin for any other in the world.

Because it is so special, we have special responsibilities to fulfill our commitment to sustainability. That is, to fulfill our commitment to our children, and to their children, so that their social, economic and natural capital – so that their overall sense of, and capacity for enduring prosperity – is no less promising for them than it is for us. Indeed, let us bequeath them a Basin of even greater promise. Let us instill in them that we are part of the Basin ecosystem; that we must honour the reality that we share it with other species who in return for our care of them, will help to ensure our own survival.

It is precisely because of what we have — the preciousness of what we have inherited – that we must restore, protect and sustain this ecosystem.

The Fraser Basin Council was created 5 1/2 years ago expressly to be an advocate for the sustainability of our home, the Fraser Basin.

Just as there is no other basin in the world quite like the Fraser Basin, there is no other group quite like the Council – a non-government organization that works as a trusted facilitator, using a unique model of collaborative governance that includes the four orders of government, the private sector, and civil society.

The Council is a custom-built, independent vehicle that helps to ensure that the decisions we collectively make now will protect and advance the Fraser Basin's economic, environmental and social sustainability, fully into the future.

I want to recognize the unique and special contributions of all of Council's partners, particularly the four orders of government within the Council: local, First Nations, Provincial and Federal. The Council could not work with the loss of any one of the four.

I also want to acknowledge the passion and commitment of our ten regional Directors who bring broad perspectives from communities throughout the Basin; and of our four non-government Directors who reflect the social, environmental and economic interests across the entire watershed.

We are blessed with dedicated directors and a truly outstanding staff.

A key part of the Council's mandate, as set forth in its Constitution, is to measure progress toward sustainability.

Over the past two years, the Council has worked in partnership with government, non-government and private sector groups to develop a set of sustainability indicators so that we may assess our progress toward sustainability. To produce, if you will, a Snapshot on Sustainability.

This Snapshot looks at sustainability trends and indicators in 16 different areas. All are interconnected and vital to sustainability.

Without question, it has been very difficult to reach agreement on a set of indicators as an overall snapshot of Basin health. Some of you will be looking for your favourite indicator and may be disappointed. Note that the indicators selected for this inaugural report serve only as guideposts toward sustainability – they can and will be revised.

One of our major challenges is to learn how to hold a longer-term view of the future and, with that view in mind, thoughtfully address the urgent needs of today.

Note also that there are some important gaps in our knowledge and some deficiencies in current data. We cannot, for example, gauge some trends because the data is too sparse. Quite simply, we must work together to get more complete and more predictable data.

Think of our Report as a medical check-up on the health of the Fraser Basin. So, how is the Fraser River Basin doing? The good news is that, in many ways, we are doing fairly well. But, several indicators in the report clearly tell us that some difficult challenges lie ahead. On a number of fronts, we are at a crossroads. Here are some highlights from the Snapshot Report.

The first indicator is **Population,** which affects all aspects of sustainability.

There are two important trends with respect to population: growth and decline. Each has its own implications for sustainability. The Basin's overall population rose from 1.7 million in 1981 to 2.6 million in 2001 – and it's projected to reach 4 million by 2031. But the proportion of people living in some rural regions and interior communities has declined; 87 percent of the Basin's people now live in the Lower Mainland.

Rural population decline – linked to economic challenges in resource sectors – is causing concern about the sustainability of some communities. It's also spurring the need to diversify local economies and bolster community vitality.

High growth areas are grappling with different issues, such as traffic congestion, loss of agricultural land, and increased demand for housing, utilities, services and infrastructure. Managing growth smartly lessens the impact. Five of eight regional districts in the Basin have adopted or are exploring strategies to manage growth. Municipalities also are accommodating growth in ways that are consistent with regional strategies. For example, the City of Vancouver contained about 80 percent of its population growth within high-density neighborhoods, thus minimizing urban sprawl.

Population is also directly linked with resource consumption and waste generation. These impacts, too, can be managed. For example, recycling, composting and waste reduction have reduced waste going to landfills by 50 percent per person. So growth in itself need not be a problem – it's how we grow and how we manage its impacts.

• **Health** is a key sustainability indicator because it's intimately linked to quality of life. Health also is a function of our social and economic circumstances – and of environmental quality.

Life expectancy has increased over the past 10 years, but Basin residents say they are not as healthy as they were in 1994. At the same time, the proportion of overweight people has soared. It's double what it was in 1985, and child obesity has tripled.

Another important health trend is that respiratory illnesses now are the third leading cause of death, after cancer and heart disease. In the Upper Fraser region respiratory disease rose by 50 percent between 1995 and 1999. This trend coincides with changes in another key indicator, air quality, which, when poor, is known to pose health risks.

• Building constructive **Aboriginal and Non Aboriginal Relationships** is one of the most important challenges facing Basin residents. There is progress in some areas, and signs of continued uncertainty and conflict in others. Building constructive relationships is crucial to reconciling issues of aboriginal self-determination, which in turn is essential to establishing certainty, stability and social, economic and environmental sustainability for all Basin residents.

Treaties can be one avenue to building better relationships, but the pace of progress has not been satisfactory. Today, 42 of 91 First Nations in the Basin are part of the treaty process. Twelve treaty tables representing 36 Indian Act Bands have reached Stage-4 (Agreement-in-Principle). However, many First Nations have chosen not to participate in this process and have pursued other mechanisms to clarify rights and title, foster self-determination and build constructive relations. All First Nations have a variety of tools and approaches available, including community-based initiatives, policies and programs, legal claims, treaties, protocols, and cooperative management agreements.

Aboriginal population growth in the Basin more than doubled between 1981 and 1996 and now stands at 67,000. While historically there has been a large gap between the social and economic well being of Aboriginal and non-Aboriginal people, trends are improving for many indicators, including life expectancy, housing, drinking water quality, high school graduation, mortality and infant mortality.

Building constructive relationships is the area in which there is the most room for improvement. This requires determined efforts to establish dialogue, to cooperate in decision-making, and to use more collaborative models for working together.

• Good **water quality** is essential to a good quality of life. Without safe drinking water, we can't have good health. And good, clean water maintains healthy ecosystems for fish and wildlife and their habitat.

Trends in water quality are mixed. Of 35 water bodies in the Basin monitored between 1985 and 2000, 19 sites showed no detectable change in quality; 11 showed improvement; and 5 sites showed deteriorating quality. In half the sites monitored, water uses are threatened or impaired. The number of boil water advisories issued per year in the Basin has more than doubled since 1995. And 25 percent of confirmed waterborne disease outbreaks in the province since 1990 have been in the Fraser Basin.

Excluding Vancouver and Victoria, groundwater sources supply 25 percent of the total municipal drinking water in BC, and are often the only available or affordable source for domestic use. The Fraser Basin has 17 of BC's 43 aquifers with reported groundwater concerns; 11 in the Lower Mainland and six in the Interior regions.

On the plus side, there have been significant investments in water and sewerage treatment facilities. There has also been a 98 percent reduction in dioxins in the effluent of seven pulp mills in the Basin.

Ensuring good water quality requires the combined efforts of individuals, communities and industry – with increased water monitoring to detect problems and to support needed improvements.

• **Air Quality** is another critical requirement for health. We each breathe more than 11,000 litres of air a day. We know that energy consumption, transportation and industry are all linked to air pollution levels, which in turn may be associated with increases in a variety of respiratory diseases, the third leading cause of death in the Basin. One of the most serious air pollutants affecting respiratory health is fine particulate matter – or PM. It's of special concern for children, the elderly, and those with respiratory diseases, such as asthma.

Since 1994, average levels of PM have generally improved in the Basin, but we know that certain communities in Greater Vancouver and the Fraser Valley have been regularly exposed to known health risks more than 15 percent of the time. All of the communities monitored in the Cariboo and Upper Fraser continue to be exposed to levels of fine particulate matter with known health risks more than 10 percent of the time. Respiratory disease is particularly high in these areas.

Besides PM, threats to air quality include ground level ozone (GLO), nitrogen oxides, carbon monoxide and volatile organic compounds. They all affect air quality, and together, these pollutants make smog, which is of particular concern in Greater Vancouver and the Fraser Valley.

Much is being done to improve air quality, including: encouraging people to drive less; developing municipal airshed management plans such as Prince George, Williams Lake and Quesnel are doing; and encouraging the development of clean-air industries. But you need only stand outside after a couple of rainless days in the Lower Mainland to see – and know – that air quality isn't what it should be.

• **Fish and Wildlife** are bellwethers of ecosystem health. If fish and wildlife in the Basin are doing well, it may be a good indication of healthy ecosystems. Healthy salmon stocks are of special concern. They are vital to our ocean, freshwater and land ecosystems, and commercial and recreational fisheries depend on them. Salmon are also integral to First Nations communities, both as a source of food, and as a link to cultural and spiritual traditions.

The good news is that the number of salmon returning to spawn in the Basin has increased in half the stocks assessed, when comparing the average of the past decade with the long-term average. The bad news is that half the stocks are declining. About 3 percent of salmon stocks assessed in the Fraser Basin are at a high risk of extinction, with particular concern for coho stocks.

The status of salmon stocks is influenced by many factors, including the health of freshwater and ocean environments, harvest levels, enhancement and survey methods. Unfortunately, there are many uncertainties and limitations with respect to the salmon stock assessments.

One in ten species in the Basin has shown a significant decline in population and is "red-listed" – considered to be threatened or endangered. However, fish and wildlife now benefit from widespread strategic land use plans and protected area planning. The total land area with protected area status in the Fraser Basin has increased from 7 to 13 percent between 1991 and 2002. Today more than 3 million hectares are protected. Although the area protected has doubled, there are still important ecosystems with 4% or less of their area designated as protected, particularly in the Fraser Basin lowlands.

We have proud accomplishments, but much more research, monitoring and assessment – in conjunction with improved habitat protection and restoration – are needed to ensure the sustainability of fish and wildlife in the Basin.

Economic Diversification contributes to economic health and to community stability. Diversification reduces reliance on any one resource or service, and thus enables communities to adapt to change.

Based on employment distribution among sectors, the Basin seems to be less diversified in 1996 than it was in 1981. Does this mean we're going backward? Not necessarily.

Most people now work in the Community, Business and Personal Services Sector (CPB), which grew from 30 percent to 39 percent in that same period. But this service sector itself grew more diversified with the emergence of new technology and innovative industries and consulting services. You may be surprised to learn that this sector is the primary source of jobs in all regions of the Basin.

Other main sources of employment vary by region. In the Upper Fraser and Cariboo, manufacturing has the number two spot with its pulp mills and sawmills; the Thompson depends more on mining than other regions; the Fraser Valley, on agriculture and government services; and the Greater Vancouver, Squamish and Pemberton region relies more on finance, insurance and real estate than other regions.

Economic growth data specific to the Basin are not available, but Real Gross Domestic Product in BC grew by 55 percent between 1981 and 2001. Since the Basin has two-thirds of BC's labour force, we will assume that the Basin experienced a similar increase in real GDP.

We know we can generate strong economic growth in the whole Basin. Success in diversifying has been uneven, but there is great promise because communities, which achieve success, will share their insights and strategies with those who need it.

• **Energy**. Since 1981, BC has increased energy consumption by 28 percent and greenhouse gas (GHG) emissions, between 1990 and 2000, by 25 percent. The two increases correspond with the 23 percent rise in population over the last decade.

About two-thirds of total energy consumed came from petroleum and natural gas. In 2000, more than 80% of the greenhouse gas emissions in BC came from energy production and use, with the transportation sector contributing half these emissions and half the increase.

A strong economy needs safe, reliable and affordable energy supplies. But we don't need the increased greenhouse gas emissions and the potential climate change impacts associated with fossil fuel consumption.

Some signs of a changing climate in the Fraser Basin include the following:

• Average temperatures are warmer than a century ago by 0.5° C on the coast, and 1.1° C in the interior regions.
• The Fraser River is 1.1 degrees warmer now than it was in 1953.
• Average sea levels along most of the coast are four to 12 centimetres higher now than a century ago. This could be serious to the Lower Fraser valley when the next major flood occurs.

Other possible impacts of climate change include increased flooding, drought, forest fires and pest outbreaks. We already know that warmer than average winters have increased the survival rates of the Mountain Pine Beetle, which continues to infest our interior regions. This may be due to a warming climate. We are in the hottest decade of the century, and many scientists suspect that global climate change is already upon us with severe consequences in BC's communities and forest ecosystems. The Council is particularly concerned because almost all of the province's pine beetle infestation is in the Fraser Basin.

We and future generations need to use energy more efficiently and produce fewer emissions; we need to increase our energy supply from renewable, cleaner sources such as micro-hydro-electricity, solar, wind and tidal power.

Noxious Weeds – invasive plants (or non-native species) – are spreading, like weeds are known to. They disturb ecosystems such as grasslands and harm agricultural productivity. If left unchecked, noxious weeds could be even more serious than the pine beetle infestation.

• **Fraser River Flooding**. The question is only when – and how severely – the Fraser River will flood again. We have a one-in-three chance of a Fraser River flood of record in the next 60 years. That means a flood like the devastating Fraser River floods of 1894 and 1948.

Many of the Basin's communities are vulnerable to Fraser River flooding, particularly in the Fraser Valley, Greater Vancouver and Thompson regions, but also in the Cariboo and Upper Fraser regions. Today there are more than 327,000 people living in more than 100,000 homes within the floodplain of the lower Fraser.

The costs of the next Fraser River flood of record – if major dike failures occurred – could reach billions of dollars in direct flood damages – substantially more than from the last great flood of 1948. The flood's damages could extend well beyond the Valley, cutting off ground transportation, air transport, trade, and shipping from Greater Vancouver.

The good news is that communities within the Fraser Basin are managing flood hazards with land use planning, flood protection works and emergency preparedness. More than three-quarters of all survey respondents in the Fraser Basin have floodplain maps, flood provisions in their Official Community Plans, and flood protection works. Almost 90 percent have emergency response plans.[2]

But some communities in the floodplain have inadequate flood protection works; they fall short of the provincial design standard, which is based on the 1894 flood of record. More than half of the 118 kilometres of dikes from Hope to Mission are considered to be too low. And about 17 percent are low by more than 0.4 metres.

As with other indicators, much has been done – but there is more to do to achieve sustainability.

For example, we are particularly concerned about the data we have on community engagement, which suggests that we are donating less, voting less and volunteering less. So, what is happening here? The root causes may be many, but one thing is for sure: a sustainable future arises from a responsible, informed and involved citizenry. So, how can this trend be reversed?

We need leadership that is not only fundamentally collaborative, but also courageous; leadership that not only builds a compelling agenda, but then produces results.

Protecting and preserving our natural heritage is a fundamental value for Canadians. In a continent-wide EKOS survey conducted last year, participants reported that leaving a clean environment for future generations is the most important element in being a Canadian. That value ranked 6th in the US.

That same poll indicated that Canadians believe that the federal government should focus on healthcare first – with environmental health and managing natural resources a close second and third.

This is what the people value.

They understand that quality of life is inextricably linked to the quality of our natural environment. And they instinctively know that taking action to preserve and protect the environment goes hand in hand with good, sustainable, economic performance. Indeed, they are either linked, or they are unsustainable.

The message is clear for decision-makers. The people want them to be courageous and heroic in making decisions that will leave a clean environment for future generations.

There is no shortage of examples to prove that collective effort can reverse unsustainable ways, and that amazing things can happen.

Witness the collaboration to clean up the single worst metals contamination in North America at the site of the former Britannia mine.

Witness the growing number of Community to Community forums that foster dialogue and strengthen relations between local and First Nations governments.

Witness the resurgence of bald eagles, once in severe decline from the effects of now-banned DDT. They now are thriving in locales across the continent.

Witness the collaboration in the Nechako Watershed ending 50 years of conflict, with agreement on the construction of a coldwater release facility to stabilize the Nechako's temperature and flow regimes.

And witness the strength of the Adams River sockeye run, with significant numbers returning in 2002.

Change is possible, and necessary, to advance sustainability.

This Snapshot on Sustainability gives us a broad picture of where we stand here and now on the way to creating a sustainable future.
But what this Snapshot is really giving people of the Basin is a golden opportunity to lead by example – to show ourselves and to show the world, what can be done.

To show ourselves – and the world – what people committed to creating a sustainable future can achieve.

The previous State of the Basin address by Iona Campagnolo challenged us to develop this picture of the Basin, at this point of time. (I hope Her Honour is pleased with what we have done.)

I want to conclude on a note of historic and future importance. In 1950, Bruce Hutchison wrote the first substantive book on our river, *The Fraser*. Hutchison's writing is often poetic about the Fraser's power and majesty, but he was also sometimes wrong about the people of the Fraser. Wrong in his assessment that we have seen the river as a brutal force that must be tamed. Wrong in his view that the River was "a profligate waste of energy."

In his final chapter, "The Future of the River," Hutchison marvels at the huge amount of fresh water that spills into the ocean, calling it "the largest source of unused power left in the whole of North America."

He goes on to say, "The government must consider the relative value of various resources. If it has to chose between two million horse power of electricity operating a gigantic tidewater industry, and a portion of the salmon run, its choice is obvious." And finally he adds, "not long will this power go unused."

To create sustainability and enduring prosperity in all its forms – we must listen to the people of the land. The people of the land – the people of the Basin – rejected Hutchison's suggestion to dam the Fraser. Instead of that 2-million horsepower, they chose, not just the fish, but also the natural, social and economic capital that, in combination, produce a very rare – and therefore precious – way of life.

This combined resource – this way of life … this Basin – is the envy of the world. It is even more precious because its future is in our hands.

The people of the Fraser River Basin collectively made an heroic, courageous, far-sighted decision to keep the main stem of the Fraser River free from obstruction. In the history of our province, this must be one of the most important decisions for sustainability. In our pursuit of sustainability, what can we do now to match that decision? What courageous, heroic act might we take that will help ensure the enduring prosperity of our social, natural and economic assets?

Whatever that decision might be, its inspiration and genesis will come from listening to the people of the Basin. Its leadership will come from those who know that sustainability is deeply engrained in our identity.

So, when we meet again in two years time, let's make sure the indicator trends are getting better.
In five and ten year's time, let's become witness to other sustainable success stories. In our communities. In our environment. And in our economy.

And in a generation's time, people in other basins will point to the Fraser Basin and say, indicator by indicator, we have been leaders in showing the way toward sustainability.

Endnotes:
1. *This Place on Earth 2002: Measuring What Matters*. Northwest Environment Watch. Seattle, Washington.

2. Based on responses to a survey conducted by the Ministry of Water, Land and Air Protection.