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Project Manager – VRHS
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Dear Project Manager

DRAFT VICTORIAN RIVER HEALTH STRATEGY

Enclosed is an outline of Victoria’s freshwater trout and salmon industry. The outline was extracted from a submission made by the Victorian Trout Association to EPA in regard to the Draft State Environmental Protection Policy (Waters of Victoria) on 29th March 2002.

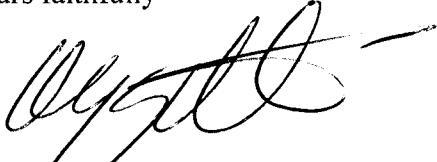
The reason for sending this outline is that the 156 page draft Victorian Rivers Health Strategy provides a comprehensive coverage of virtually everything relevant to Victoria’s rivers but nowhere in the document is aquaculture mentioned. Victoria’s freshwater aquaculture is now a \$12 million industry employing close to 200 people, mainly in country Victoria. Trout or salmon farms are situated on at least 10 of Victoria’s rivers with most of the large farms being in the Goulburn/Broken catchment.

The freshwater salmonid industry would like to think that the reason it is not mentioned in the River Health Strategy is because it is not a significant industry and everyone is happy about its past performance and its future direction. The industry does have concerns about proposals to eliminate “cold water pollution”, environmental flows, the possibility of restricting new trout farms on the Goulburn river below Lake Eildon and on other water environment matters covered in its submission to EPA. It would also have concerns about any possible impact on trout farms if they are situated on rivers selected for future improvement to attain ecologically healthy status.

If, after considering the information provided on the freshwater salmonid industry, any of the members of the Reference Committee or the Scientific Committee have any concerns

or require additional information please do not hesitate to make contact. The industry would welcome anyone wishing to visit any of the trout or salmon farms.

Yours faithfully

A handwritten signature in black ink, appearing to read 'E. Meggitt', with a long horizontal stroke extending to the right.

Edward Meggitt
President

Encl.

ATTACHMENT (RE: DRAFT VICTORIAN RIVER STRATEGY)

OUTLINE OF VICTORIA'S FRESHWATER TROUT AND SALMON INDUSTRY – MARCH 2002

1 HISTORY

Trout were introduced into Australia some 140 years ago mainly for the purpose of stocking rivers and lakes for recreational trout fishing. Commercial trout farming commenced in Victoria over 40 years ago when it was recognized that Victoria's supply of cold, clear river water gave it a natural advantage not enjoyed by other parts of mainland Australia nor by many other places in the southern hemisphere. Trout farms opened up in many parts of Victoria but the large production farms were concentrated in north-east Victoria on the Goulburn river and its tributaries below Lake Eildon. Australia's first and only freshwater salmon farm commenced farming Atlantic salmon on the Rubicon river about 8 years ago and it now specializes in the production of salmon caviar.

2 DESCRIPTION OF THE INDUSTRY TODAY

Victoria currently accounts for approximately 80% of Australia's freshwater trout production and is the second largest freshwater trout producer (after Chile) in the southern hemisphere. There are over 20 trout farms (and one salmon farm) in Victoria. These farms range in size from tiny fish-outs, having only a few small ponds to large operations producing hundreds of tonnes of trout each year. About one-third of the farms are producers of table fish only, whereas other farms may also be involved in other activities, particularly tourism (including fish outs).

In Victoria the freshwater salmonids (mainly rainbow trout and some Atlantic salmon and brown trout) are farmed in flow-through ponds or raceways under intensive conditions using commercial pelleted feed. Considerable volumes of clean cold water are diverted or pumped from adjacent rivers or streams, passed through the stocked ponds and then discharged back into the waterway downstream of the inlet supply point. High dissolved oxygen content in the incoming waters is necessary to optimize production. Oxygen levels decline rapidly as water temperatures rise.

The salmonid farms are licensed by Fisheries Victoria, by the relevant water authorities (to divert water) and by EPA (for the quality of the water returned to the waterway).

Most of the farms do their own processing and many of them also undertake smoking and freezing of trout products.

3 SIZE AND POTENTIAL OF THE INDUSTRY

The Victorian salmonid industry's estimate of production for the current year amounts to somewhere between 1800 and 2000 tonnes of product worth approximately \$12 million. The industry employs close to 200 people, mainly in country Victoria and also makes significant use of local contractors for transport, maintenance, earthworks etc.

Chilled, smoked and frozen freshwater rainbow trout (and salmon) is supplied to wholesalers in all major centres in Australia, to supermarkets, frozen food distributors, smokehouses and pate manufacturers. A small amount of product is also exported to Asia.

The salmonid industry currently accounts for about two-thirds of Victoria's aquaculture (seafood) production. However the freshwater trout industry, even though it has the advantages of a clear uncontaminated environment and "disease-free" stocks due to Victoria's geographic isolation is minute by world standards. Current production in Australia is estimated at approximately 2200 tonnes per annum. This hardly compares with the expanding northern hemisphere industry, which produces over 400,000 tonnes per annum with countries such as Spain, Italy, France, Britain, United States, Denmark etc. all producing in excess of 25,000 tonnes a year.

The Victorian freshwater salmonid industry believes it does have scope to expand within its existing phosphorous cap. However, because of the cap and the acknowledged shortage of appropriate (and environmentally acceptable) new sites the industry probably has scope to grow to no more than double its existing size. This expansion would require better feed quality, adding oxygen to the water and improved (but expensive) effluent controls with the costs being partly set-off against increased production.

4 WORLD AND VICTORIAN AQUACULTURE PERSPECTIVE

Between 1960 and 1999 the world population doubled from 3 to 6 billion people and it is continuing to grow by approximately 78 million people per annum. Governments and industry have a joint responsibility to ensure food security for the world's population. The Food and Agriculture Organisations of the United Nations defines food security as "access by all people at all times to the food needed for a healthy and active life". According to Mary Robinson (United Nations High Commissioner for Human Rights) "few economic rights are violated on such a scale as food and nutrition rights".

Globally, more fish is consumed on a per capita basis than any other type of meat – 16.0 kg in 1998 followed by pig meat (14.9 kg), poultry meat (10.1 kg) and beef and veal (9.8 kg). However in the last 20 years, despite huge effort, there has been no increase in the supply of fish from captive fisheries. In contrast, between 1984 and 1998 the per capita availability of fish from aquaculture has increased from 1.45 kg to 5.23 kg. In 1998 33.1% of total global fish supplies came from aquaculture.

In Victoria the commercial catch of scalefish in 2000/1 amounted to 3235 tonnes. This is a 20% decline over the last 4 years. Conversely Victoria's freshwater salmonid aquaculture production has increased by well over 30% over the same period.

Humans have a right to eat fish. As harvests from captive fisheries remain static or decline, aquaculture, in the face of increasing demand from a growing population, must meet the deficit. For this reason aquaculture had been described by Fisheries and Research Development Corporation (FRDC) as the waking giant of Australian fisheries. Victoria who was once a leader in Australia's aquaculture development has for various reasons (including lack of natural advantages) now fallen behind most of the other states.

5 HEALTH BENEFITS

The trout industry is extremely proud of the product it produces. It is a healthy food product that is fundamental to our existence on the planet. It is a product in the best interests of the community of which Victorians should be proud.

Trout (and salmon) are not only a rich source of protein but are also an excellent source of polyunsaturated fatty acids (especially Omega-3). Most of the considerable health benefits attributable to fish come from Omega-3 that cannot be made in the body. Omega-3 must be provided by the diet and one of the richest sources of the scarce Omega-3 is oil rich fish such as trout and salmon.

Insufficient Omega-3 fatty acids in the diet amounts to deficiency, and is associated with an extensive range of health problems including coronary heart disease, rheumatoid arthritis, diabetes, bowel cancer, osteoporosis and disorders of the central nervous system, including depression and impaired cognition (leading to dementia). A recent study also found that children who consume fresh fish, such as salmon and trout, have a lower risk of developing asthma. It has also been recognized that it is important to ensure an adequate intake of Omega-3 fatty acids during pregnancy and lactation for the benefit of both mother and child. In addition, recent studies have shown that older people who regularly eat fresh fish rich in Omega-3 had about half the chance of dying from coronary heart disease as those who ate no such fish.

6 TROUT FARMS AND THE ENVIRONMENT

Freshwater trout and salmon aquaculture cannot exist without a clean disease-free water supply. While it is acknowledged that fish farms do return nutrients to the waterway, the ongoing good health of the waterway is of critical importance to trout farms that would be the first to feel the impacts of deteriorating water quality. Accordingly, fish farms, which monitor water quality and flow 24 hours a day should be viewed as a natural friend of the environment.

Victoria's freshwater trout and salmon farmers recognize that there is a demand on all industries to become environmentally sustainable. Accordingly, they endorse the objective to protect Victoria's environment while allowing for development that

improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

In Australia one of our scarcest resources is water. Our salmonid farming systems rely heavily on the water in our rivers. Importantly, however, the water from the rivers is not consumed by the fish. Salmonid farms divert water for the fish to live in and to use as a source of oxygen. The water passes straight through the farm and back into the river. The only water not returned to the river is the moisture content of the fish itself. By comparison the amount of water consumed in traditional farming is huge, ranging from 1000 litres of water to produce just 1 kg of wheat or rice to close to 50 times this figure to produce a 1kg of beef on the average farm (source CSIRO).

Trout farms, although producing a healthy product with extremely efficient utilization of resources, do discharge nutrients to the rivers. This applies around the world and it is acknowledged that in some countries (for example Denmark) it has become a problem because of an excessive number of trout farms on certain rivers. This is not the case in Australia and hopefully will never become the case.

Phosphorous is one of the main concerns in Victoria as it plays a major role in outbreaks of blue-green algae. However, it should be noted that no blue-green algae outbreaks have been reported within 150 kms downstream of any of the trout farms. It is believed the trout farms are appropriately situated on rivers that can accommodate them and the volume of phosphorous contributed by fish farms is small relative to irrigation drains, sewerage treatment plants, dry-land runoffs etc.

With most of the trout and salmon farmers based in the Goulburn Broken Catchment the EPA and Goulburn Broken Catchment Management Authority agreed in 1996/7 to cap phosphorous discharge from trout farms at the 1993 level of 28.6 tonnes. Fish farmers were expected to demonstrate in future that they had made substantial effort in implementing best management practices, aimed at reducing the amount of total phosphorous discharged relative to each tonne of fish produced. Since 1996 the trout industry has worked with feed manufacturers and government bodies to reduce phosphorous discharge. By improving feed quality and employing other management techniques, phosphorous discharge from the salmonid farms has been reduced from 24.2 kg per tonne of trout produced in 1993 to about 12.9 kg per tonne of trout produced in 1999/2000.

In 1999 the Victorian Trout Association together with Victorian Fisheries, the EPA and overseas experts got close to completing a Best Practice Environmental Guidelines document for Victoria's salmonid industry. This document was delayed due largely to changing SEPP requirements. Hopefully an agreed BPEMG document can be finalised shortly

By world standards Victoria's small freshwater trout and salmonid industry is tightly controlled from an environmental point of view, certainly far more so than trout farms in other Australian states. The farms have survived severe droughts and floods and have

done their best to behave in an environmentally responsible manner. Industry also wishes to emphasise that it does not support any fish farm that does not comply with its EPA and diversion licences or does not comply with accepted environmental standards.

Trout farming continues to expand around the world in places where there is clean cold water. Cold water is an essential ingredient of successful and environmentally friendly trout farming. For this reason many of Victoria's biggest trout farms are situated on the Goulburn river below Lake Eildon which releases large volumes of cold water during summer. Proposals to lift the temperature of Lake Eildon releases because of concern about coldwater pollution are of huge concern to these farms.