



Washington – British Columbia Chapter
American Fisheries Society

Established 1978

148 Rogers St NW Olympia, WA 98502



**2008-2009
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June 10, 2009

To:
Honorable Barry Penner, Minister of the Environment
Geoff Young, Chair, Capital Regional District Board
Kelly Daniels, Capital Regional District
Dwayne Kalynchuk, Capital Regional District
Judy Brownoff, Chair, Core Area Liquid Waste Planning Committee

Dear Victoria Area Leaders,

This letter transmits a copy of a resolution recently passed by the membership of the Washington-British Columbia American Fisheries Society encouraging and supporting the installation of secondary, or better, treatment for Victoria-area sewage. The resolution is attached below.

We are an international organization of nearly 800 fisheries science and management professionals from academia, government agencies, and the private sector. Our mission includes 1) advancement of conservation and intelligent management of aquatic resources within a context of sound ecological principles, and 2) the gathering and dissemination of information pertaining to aquatic science and fisheries management. It is from these frames of reference that we recognize and encourage the need for improved sewage treatment in the Victoria region. You can learn more about our organization at <http://www.wabc-afs.org/>.

We trust that this resolution will be helpful in your quest for cleaner marine waters in the Victoria area. Please do not hesitate to call on me if the American Fisheries Society can be of any further assistance.

Sincerely,

Lawrence G. Dominguez, M.E.S.
President, Washington-British Columbia Chapter
American Fisheries Society
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**Resolution to Encourage Treatment of Victoria-area Sewage
Discharged to the Strait of Juan de Fuca**

Passed Unanimously by the Membership of the Washington- British Columbia Chapter of the
American Fisheries Society at their Annual Meeting, April 22, 2009

WHEREAS the waters of the Strait of Juan de Fuca are vitally important rearing, migration, and spawning habitats for commercially, recreationally, and ecologically important fish, shellfish, seabirds, and marine mammals, as well as myriad other marine organisms; and

WHEREAS on average over 115 million litres of raw sewage, landfill leachate, and residential and commercial wastewater per day is being discharged from Macaulay Point and Clover Point approximately 1.5 km from Victoria's shores¹; and

WHEREAS twenty-eight chemicals found in Victoria's sewage have been measured at levels that exceed Canadian or provincial water quality guidelines (WQGs) for the protection of fish and aquatic life²; and

WHEREAS the effluent is lethal to all fish exposed to 100% effluent concentrations and kills 50% of fish when diluted to between 6 and 24% effluent^{3,4}; and

WHEREAS oyster and mussel larvae show abnormal development when exposed to low concentrations of effluent (1.1-3.9%)⁵; and

WHEREAS sewage concentrations as low as 0.05% effluent in seawater caused gene expression alterations in juvenile Chinook salmon⁶; and

WHEREAS the area around Victoria's two outfalls has sediment quality conditions sufficient to warrant designation as a contaminated site, as defined by the BC Contaminated Sites Regulation, due to contamination by 19 different heavy metals and other chemicals⁷; and

WHEREAS benthic community diversity near the diffusers is reduced and pollution-tolerant invertebrates dominate the sediment-dwelling organisms⁸; and

WHEREAS the evidence is clear that the continued dumping of raw sewage, and all the toxins it contains, is adding to the pollution of our region and harming our oceans; and

WHEREAS in addition to the benefits that come with traditional wastewater treatment methods, new approaches and technologies for treatment can recover valuable resources from the waste that can be re-used (called Integrated Resource Management⁹). Other constituents, especially water, can be re-used for irrigation, industrial uses, or wetland recharge, thereby reducing the need for water withdrawals from fish-bearing streams; and

WHEREAS the Washington - British Columbia Chapter of the American Fisheries Society is an organization of nearly 800 fisheries science and management professionals and therefore particularly qualified to render an opinion on this issue;

THEREFORE BE IT RESOLVED, that it is our scientific professional opinion that ending the ongoing sewage discharge from the McCauley and Clover outfalls in the Juan de Fuca Strait is scientifically justified; and

THEREFORE BE IT FURTHER RESOLVED that we believe that it is in the best interest of Victoria-area residents, the citizens of British Columbia and Washington, and the marine environment to move toward Integrated Resource Management to optimize the benefits of sewage treatment; and

THEREFORE BE IT FINALLY RESOLVED, the Washington - British Columbia Chapter of the American Fisheries Society encourages and supports the efforts of B.C. provincial and regional leaders, and the public, to bring secondary or better sewage treatment to the Capital Regional District of Victoria as quickly as possible.

¹ CRD Summary of Annual Report for 2006, www.crd.bc.ca/wastewater/marine/reports.htm

² Golder. 2005. *Potential environmental effects of the Macaulay and Clover Point outfalls and review of the wastewater and marine environmental program.*

³ EVS Environment Consultants. 1998. *Toxicity Testing on Samples Identified as Project X2 MC and Project X2 CL (Both Collected March 23, 1998),*

⁴ Environment Canada (DOE) Toxicity Testing Lab, unpublished data

⁵ Golder. 2005. *Potential environmental effects of the Macaulay and Clover Point outfalls and review of the wastewater and marine environmental program*

⁶ Osachoff, H.L. 2008. Toxicogenomics effects of sewage on juvenile Chinook salmon (*Oncorhynchus tshawytscha*). Thesis (M.Sc.) - Dept. of Biological Sciences - Simon Fraser University.

⁷ MacDonald DD, Smorong, DE. 2006. MacDonald Environmental Sciences Ltd. *An Evaluation of Sediment Quality Conditions in the Vicinity of the Macaulay Point and Clover Point Outfalls*, pg. 39 & tables 17-20

⁸ Stubblefield, W.A., et al. 2006. SETAC. *Scientific and Technical Review, Capital Regional District Core Area Liquid Waste Management Plan*, pg.13.

⁹ Integrated Resource Management Study Team. 2008. Resources from Waste, Integrated Resource Management Phase I Study, c/o Aqua-Tex Scientific Consulting Ltd., Suite 205, 2187 Oak Bay Avenue, Victoria BC V8R 1G1.