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## Water and Waste Committee Report

### SANITARY SEWERS FOR THE MADRONA SERVICE AREA

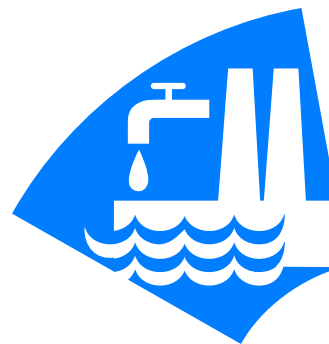
In April 2004, Koers & Associates Engineering Ltd. (Koers) submitted a brief entitled "Pre-Design Report, Sanitary Sewer Extension, Madrona Service Area" to the Regional District of Nanaimo (RDN). The Report provided details on the design criteria used as well as an estimate of the capital cost.

In late 2005, the NNRA Directors believed there was a need to update the capital costs identified in the 2004 Koers Report prior to approaching residents to see if they would support the installation of sanitary sewers in their area. The cost estimate update was considered necessary as a result of the rapidly escalating construction costs in the Province. During a December 11, 2005 meeting with George Holme (Area E Director) and the three area associations (Fairwinds, NNRA and NPORA), Director Holme agreed to have RDN staff allocate funds in their 2006 budget to update the capital costs in the 2004 Koers Report.

In the Spring of 2006, the RDN retained Koers to carry out a review of the current unit prices for construction of the sanitary sewer extension from the Pacific Shores property to service the Madrona Service Area and prepare an updated cost estimate.

The NNRA received a copy of the Koers capital cost estimate update on September 12, 2006 from the RDN. The cost estimate update confirmed that capital costs had increased by approximately 23% from the previous study and are now estimated to be \$16,200 per lot in 2007 dollars allowing for 10% escalation over estimated 2006 costs.

On September 12th, the RDN also advised us that there were two other cost components not included in the above capital cost estimate, which consist of RDN associated costs and direct homeowner costs. The RDN cost components include a one time capital charge, administrative costs, referendum/petitioning costs, permit fees, and the financing cost charges associated with a 20 year amortization period. The direct homeowner costs cover the cost of connecting the existing home sewer system to the to the RDN sewer line at the edge of the road right of way and pumping out and decommissioning the existing septic tank.



On October 13, 2006, representatives of the NNRA Water and Sewer Committee and NNRA Directors met with RDN staff as well as Director Holme and Frank Van Eynde (Alternate Area E Director) to obtain additional sanitary sewer cost information and discuss the next steps that would have to be taken.

The RDN staff referred to some order of magnitude costs that had been prepared by the Financial Services Department. Assuming that construction would not take place until the year 2008, the estimated capital cost was increased a further 10 % to \$17,800 per lot.

The homeowner will have the option to either prepay the capital cost per lot when the sewer is completed or by an annual parcel tax that amortizes the capital cost per lot over a 20 year period.

On October 12, 2006 the governments of Canada and British Columbia officially launched details of the 2007 Canada-British Columbia Municipal Rural Infrastructure Fund, allowing communities to apply for funding under this program. The federal and provincial governments will each commit \$51 million and participating local governments are expected to match this amount, for a total provincial benefit of over \$150 million. Applications for funding will be accepted until January 31, 2007 and it is anticipated that all funding from the Fund will be allocated by summer 2007. The likelihood of sanitary sewers for the Madrona/Wall Beach area obtaining funding from this program is not known at this time.

The annual parcel tax to recover the capital cost per lot is estimated to be \$1,540 assuming no grant, \$770 assuming a 50 % grant and \$525 assuming a 66% grant.

We were advised by the RDN that the homeowner cost associated with connecting to the sewer line at the edge of the road right of way was generally expected to be in the range of \$2,000 to \$4,000. The RDN also advised that for homes on the low side of the road, there could be need for individual pumping stations for some lots. These pumps will be supplied by the RDN, but the homeowner is responsible for installation, operation and annual maintenance. The homeowner is also responsible for pumping out and decommissioning his existing septic tank. This is estimated to cost \$300.

The estimated cost to homeowners for the installation of sanitary sewers has been summarized below, assuming no grant is received and the capital cost per lot is recovered through a Parcel Tax amortized over a 20 year period. We have used an average homeowner connection to sewage line cost of \$3,000.

**A) Initial One Time Cost Estimate**

RDN Capital Charge	\$1,795.00
RDN Building Permit	400.00
RDN Recovery of Petition/ Advertising Costs	25.00
Connection to RDN Sewer Line	3,000.00
Septic Tank Pump Out/ Decommissioning	<u>300.00</u>
<b>Total</b>	<b>\$5,520.00</b>

**B) Annual Cost Estimate**

Annual Parcel Tax	\$1,540.00
Annual Operating Cost	<u>430.00</u>
<b>Total</b>	<b>\$1,970.00</b>

Note that the Annual Operating Cost will be recovered as an annual “user billing” each Spring and it is expected to escalate at the rate of inflation as measured by the CPI.

Prior to proceeding with the construction of a collector sewer system for the Madrona/Wall Beach areas, the RDN would petition all of the residents to determine the level of support for such a system. The RDN has provided us with a copy of the petition that was circulated for the Barclay Crescent sewer system. In order to proceed, the petition would have to have 50% support from property owners that represent 50% of the assessed property values.

On December 8, 2006, representatives of the NNRA Water and Sewer Committee and NNRA Directors met with Mr. Glenn Gibson, the Environmental Health Officer for the Vancouver Island Health Authority to obtain his opinion on the risks to public health posed by private sewage disposal systems in the Madrona/Wall Beach areas and to solicit his support for the NNRA request for Federal/Provincial Infrastructure funding. We were pleased to learn that Glenn was very familiar with the topography of our area and he referred to several areas where poor drainage exists. On a broader scale for this area, Glenn indicated that his concerns in order of priority had been the Barclay Crescent area adjacent to French Creek, the Gary Oaks area and the Wall Beach area. Glen acknowledged that the sanitary sewer system installation had recently been completed in the Barclay Crescent Area and was of the opinion that a sanitary sewer system was not economically viable in the Gary Oaks area. That leaves the Wall Beach area at the top of his priority list. Glen confirmed that he would prepare a letter of support to accompany our application for a Federal/Provincial Infrastructure Grant.

We will be having further discussion with George Holme, Frank Van Eynde and the RDN staff in the near future to discuss the procedure for preparing a grant application. The Waste & Water Committee has scheduled a public meeting at 7:30 PM on January 22, 2007 at Nanoose Hall to review the above information with residents and to answer their questions. Representatives from the RDN have also been invited to attend this meeting.

*Kirke MacMillan*



## Protecting a World Treasure - The Enos Lake Stickleback.

The Nanoose Naturalists have become a part of a national initiative under the federal *Species At Risk Act* to recover and protect the endangered stickleback of Enos Lake in Nanoose Bay – fish that are regarded as having global significance.

### WHY ARE THEY IMPORTANT?

First, a bit of background. Officially these are termed “stickleback species pairs”, a small freshwater fish descended from ubiquitous sea-going stickleback scattered around the northern hemisphere. What’s interesting is that these species pairs are rapidly evolving into two distinct forms living side by side (or rather top to bottom) in the same lake. The speed at which this divergence is taking place is practically unheard of in evolutionary biology. And, this process is taking place in only 4 lakes in the world, and they’re all around here (Texada and Lasqueti islands, and Nanoose Bay)!

The two forms (or species pairs) in these lakes have adapted to different parts of the water column. One, a benthic form, is closely associated with the lake bottom and its vegetation where it builds its spawning nests and finds its invertebrate food organisms. The other, called a limnetic form, lives more in the mid-water parts of the lake, and finds its food from the mid to upper parts of the water column. This separation has already resulted in the two forms having markedly different physical characteristics and is thought to be enough to keep them apart reproductively, and hence to drive them ultimately into two distinct species. All this since the last ice age!

This evolutionary trick has put these stickleback pairs on the list of the 10 most important scientific breakthroughs in the world (Science 2005).

As if this were not enough, our Enos Lake stickleback have caught the attention of medical researchers. The Fred Hutchinson Cancer Research Center in Seattle has established a laboratory for the study of these stickleback. Uncovering the rapidly evolving stickleback complete genome has helped to understand the genetic and molecular basis for evolutionary change and response to environmental conditions. This in turn is showing to be useful in understanding genetic and environmental links in human cancers. (Those of you wishing more technical information can contact the author of this article).

The uniqueness and limited distribution of these species pairs have earned them the status of Endangered Species under the federal *Species At Risk Act*, which requires that measures be taken to protect them. The potential for land developments surrounding

all the stickleback lakes adds a further risk, and protective measures must be taken soon so that we can assure the future of these important fish.

### WHAT’S HAPPENING?

We may already be losing a part of the battle to save these special fish. The pair from Lasqueti Island has become extinct because of the introduction of a predatory fish into their lake.

Another pair, in Enos Lake, has hybridized over the past few years; that is the two forms have started to breed with each other, so that the forms are not as distinct as they once were. The reason for this is unconfirmed, but it is suspected that crayfish introduced into Enos Lake have destroyed much of the lake’s bottom vegetation, thereby reducing the major mechanism that keeps the forms apart. The species pairs in the two Texada Island lakes, however, are still separate forms. If we are to keep this evolutionary wonder intact, we have to protect the integrity of the Texada Island population, and find ways to restore the pair in Enos Lake.

How can we do this? Under the federal *Species At Risk Act*, a National Recovery Team (mainly scientists and government officials) has been established to carry out research programs and oversee local groups (termed Recovery Implementation Groups or RIGs), which initiate and carry out on- the- ground measures that will protect and recover the species pairs. One such RIG has been established for the Texada Island lakes, and another for Enos Lake.

A committee of the Nanoose Naturalists is the core of the Enos Lake RIG and is developing programs for 2007 to confirm the cause of the hybridization, test methods to reverse this process (such as crayfish eradication, vegetation replanting) and return Enos Lake to its former condition so it can once again support the distinct species pairs. The RIG will also work with the landowners to protect water quality and flow regime from the effects of urban development and land use, and will deliver a public information and education program to alert residents to these fish and their global importance, and to the dangers of introducing alien species into our ecosystems. To do this work, the Nanoose Naturalists have applied for funding support from the federal Habitat Stewardship Program, and has secured support from Malaspina University College, provincial Ministry of Environment, and Fairwinds Corp., the major landowner surrounding Enos Lake.

The Nanoose Naturalists are excited to be playing a role in this attempt to recover and protect such an important evolutionary treasure.

Ross Peterson

## MEMBERSHIP FEES FOR 2007 ARE NOW DUE

Your membership fee of \$10 is due now for Jan 1, 2007 to Dec 31, 2007.

This year, take advantage of our 'Payment In Advance Plan'. That's right – you can pay for as many years in advance as you want at \$10 per year. For example, pay \$20 and you will not have to worry about paying again for 2 years!

In case you have forgotten if you paid in advance last year, we will attach a note to the membership form in the center of this newsletter to refresh your memory.

If we have your information on file, you do not have to complete the membership form again. However, if you have changed your e-mail address or some other information, we ask that you do fill it out again so we can update our records.

Once you have paid, we will include your receipt tucked inside the next newsletter issued in April 2007. Please make sure to include your e-mail address, so we can forward you the new password so you can access the NNRA website for 2007.

Mail your cheque and the Membership Form to the NNRA, Box 216, Nanoose Bay, BC V9P 9J9 or deliver it to the drop box at 1412 Madrona Drive.

Please contact Diane Hill at 468-7757 or Rhonda Lott at 468-9969 if you have any questions about your membership fees.

*Diane Hill*

## NNRA Social Event for 2007

Only one social event has been planned for this year, the Pacific Shores BBQ. We are hoping to hold this event on Sunday, September 9th. The 2006 BBQ once again proved to be a huge success.

Mark your calendars now so you won't miss out on this neighbourhood event!

**Help Wanted:** We are looking for someone to volunteer as Chairperson of the Social Committee and take on responsibility for the 2007 BBQ.

*Kirke MacMillan*





## Arrowsmith Search And Rescue

### SAR IN CANADA

Search and Rescue (SAR) in Canada is divided into three areas: Marine, Air and Land. Marine and Air SAR are the responsibility of the Federal Government and are covered by the Coast Guard, Coast Guard Auxiliary and the Armed Forces. Land and Inland Water SAR is a Provincial responsibility and falls under the jurisdiction of the local Police detachment. All areas of SAR can call upon each other for assistance.

In the Oceanside area, Ground Search and Rescue services are provided by Arrowsmith Search and Rescue, a voluntary group based at the Coombs - Hilliers Fire hall.

### HISTORY AND WHAT WE DO IN THE COMMUNITY

SAR in our area was started in the early sixties by the Parksville/Coombs Volunteer Fire Department. In 1986 Arrowsmith Search and Rescue was established as a charitable organization, and assumed the SAR duties from the P/C VFD. Since formation we have grown, from local people helping friends and neighbours, to a fully integrated member of District 69 and RDN Emergency Services. In addition we assist local communities during events that require volunteer assistance.

Membership represents a cross section of the community at large. Members range in age from 19 to 70, both male and female. ASAR's area of responsibility runs from Deep Bay to the Nanoose Overhead, inland to the peak of Mt Arrowsmith and includes Lasqueti and Jedidiah Islands. Members are on call 24/7, 365 days a year.

Local call outs range from lost/injured hunters and vegetation foragers, lost/injured hikers, missing children, missing seniors, to the recovery of bodies located in areas that require our specialized skills. We assist the local communities in flood rescue/evacuation and the BC Ambulance Service during heavy rain and snowstorms and are on call to assist in the relief of any major emergency that could occur. We also instruct local Fire Departments in Embankment Rescue.

In addition, like all SAR teams, we are on call for mutual aid to assist other SAR teams in the Province and sometimes Washington State. Mutual aid requests occur after one group is called out (typically in the evening) and spends all night searching with no success. During the night a call for mutual aid will go out, from the Provincial Emergency Program (PEP) office, to other SAR Groups. These groups will then join the initial group to continue the search during the critical sunrise period and then let the initial group rest and sleep. The mutual aid groups will then continue searching throughout the day until the subject is found.

The new SAR Hall that we have built on the Alberni Highway will be fully capable, once finished, of acting as an Emergency Command Centre and will be fully equipped with auxiliary power, kitchen, shower, toilets, Command Centre and briefing rooms. It also has space to land small helicopters.

From the year 2000 to date we have responded to 159 incidents requiring over 9700 person hours of effort. These figures do not include time spent on the training that is required to develop a safe and effective working relationship with each other.

As of today we have over 30 persons on our active call out list and about 15 people on our Auxiliary list. Last year, an additional 8 members received their Ground Search And Rescue (GSAR) certification. In addition, one of our members trains tracking and search dogs. We, as a group, are very fortunate in this respect as two of his dogs are RCMP certified. Therefore we have our own Search Dogs.

To initiate a search in our area, persons must first contact the Oceanside RCMP Detachment using 911, who will then alert us. In addition to the RCMP we also fall under the jurisdiction of PEP. After information is collected the Duty Search Manager will then page out members. Not all members are on a pager, therefore the phone fan out list is activated and members receive instructions of where to go and information as to the type of call-out.



## TRAINING

All aspiring members must take a Basic SAR Course when they join. This course consists of Level 1 First Aid, basic rope work, basic water skills, communications, map and compass use, how a search is initiated and terminated, types of searches, survival skills, orientation to tracking, avalanche orientation, fixed wing and helicopter safety, subject evacuation and Critical Incident Stress Management. Following this course, members can proceed to higher and more specialized training in any of the areas pertinent to SAR.

Another area covered by ASAR is the Hug-A-Tree program. This program is designed for children 12 and under and teaches them how to stay safe in the woods, how not to get lost and what to do if they do get lost. This program is partially funded by PEP, but we still have to put out our own money for part of it. It is an excellent program and has paid off on at least two occasions. Since its inception some ten years ago we have spoken to around 20,000 children (and adults) in local schools and at Rath Trevor Park during the summers.

There is a new program coming on line called Adventure Smart. This program is similar to the Hug-A-Tree program but is aimed at teens and adults. Details can be found at [www.adventuresmart.ca](http://www.adventuresmart.ca).

## FUNDING

During an actual search, PEP reimburses members for expenses for mileage, meals, and the repair and replacement of lost or damaged equipment. Some training is covered but not the members' initial outlay for their own equipment. Members must have the equipment that will enable them to survive on their own for a minimum of 24 hours. Funding for ASAR comes, primarily, from fund raising efforts by members and donations from the local governments, residents and businesses in our area. In addition we have been receiving some funding for major programmes from BC Gaming.

One of the problems regarding fund raising in our area is the lack of large industrial concerns.

The vast majority of businesses are small and tourist orientated. In addition, given the large number of volunteer organizations in this area, someone is always endeavouring to raise funds for a particular cause; this therefore has a tendency to put a damper on the amount that can be raised.

## GOLDEN RULES FOR HIKERS AND CAMPERS

If you are a hiker, camper or just like the outdoors we suggest that you follow the following four rules:

1. Always tell someone where you are going and when you will return
2. Stay in one spot; do not wander around (Hug A Tree!)
3. Keep warm and dry, and
4. Help searchers by answering their calls.

Those are the four rules we impress on the children during Hug A Tree.

In addition, if you take a cell phone with you, please make sure that the phone battery is fully charged. Many searches have been successful because of that simple precaution!

*Contributed by Greg Field*

*(ASAR's latest task occurred on January 2nd when they evacuated the residents of Parry's Trailer Park during flooding of the Englishman River.)*





We welcome letters to this newsletter and items of interest to the residents of this area. Member submissions must include author's name and telephone number.

*address letters to:*

**Northwest Nanoose Residents Association**

**P.O. Box 216**

**Nanoose Bay, B.C. V9P 9J9**

**NNRA@shaw.ca**

To all those who have recently moved to the Nanoose area, welcome to our community. We hope you will become members of the NNRA. It's a great way to stay informed and meet your neighbours and for us to get to know you. To save time, here is an application form to fill out and mail in along with your cheque for \$10. Membership is \$10 for one calendar year (Jan 1 to Dec 31) and you may pay for 2, 3 or 4 years at a time."

**Northwest Nanoose Residents Association  
Membership Application Form**

FEE: Ten Dollars per household for 2007

**Application for Membership in the Northwest Nanoose Residents Association**

Name(s): \_\_\_\_\_

Address: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Number of adults in household?: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

New Member?  or Renewal?

Mail application and payment to:  
Diane Hill  
P.O. Box 216  
Nanoose Bay, B.C. V9P 9J9

**WORKING COMMITTEES**

**Budget and Financial Plans** – Mike Gray, Frank Herman, Dave Jamieson

**Legislation** – Kirke MacMillan (Chair), Dave Jamieson, Wolf Reidel

**Neighbourhood Issues** – Greg Field

**Water & Waste** – Don Anderson, Greg Field, Bruce Galick, Martyn Green, Ken Kyler, Ryan Pettersen (Chair), Bonnie Robertson, Colin Wykes, Lewis Vermeulen

**Membership** – Greg Field, Diane Hill (Chair), Rhonda Lott

**Social Committee** – Volunteers required

**NNRA Board of Directors**

President:	Kirke MacMillan	468-9284
Vice-President:	Dave Jamieson	468-9262
Secretary:	Greg Field	468-9764
Treasurer:	Frank Herman	468-7226
Director:	Bob De Buysscher	468-7037
Director:	Mike Gray	468-5662
Director:	Don Stewart	468-7846
Director:	Lewis Vermeulen	468-9408