

Watershed connections

Welcome

To the second issue of *Watershed Connections*, a volunteer publication for the Tod Creek watershed, distributed in February, June and October each year.

The purpose of *Watershed Connections* is to connect the community and provide information that will assist watershed residents to live and work in an ecologically sustainable manner, in harmony with the watershed environment.

Watershed Connections is produced by three members of the "Friends of Tod Creek Watershed" stewardship group, with articles contributed by watershed residents.

Please contact us by email if you would like to receive a pdf version.

We invite comments and submissions from members of the community. Please contact us at 479-1956 or email wconnections@shaw.ca

We all live in the Tod Creek watershed — the area that drains to wetlands, streams, lakes, Tod Creek estuary, and eventually the Saanich Inlet. It is a beautiful place to live but comes with many responsibilities.

The second issue of *Watershed Connections* is focussing on the lakes in our watershed. Our lakes may look beautiful, but Prospect Lake in particular is in serious trouble, as a report recently commissioned by Saanich proves (page 8). We have tried to present you with the facts and also some actions to help mitigate problems. Please see page 9 to read about a very comprehensive workshop being organized by the CRD, Municipality of

Saanich, and Prospect Lake Community Association.

Thank you to all the local residents who have contributed articles for this issue. All watershed residents are invited to contribute to future issues. If you have any interesting pictures, information about the watershed (current or historical), or any other relevant information, please email wconnections@shaw.ca or phone 479-1956. Letters to the editor are also encouraged. — EDITOR

Below: The clean, quiet waters of Durrance Lake are a popular swimming and fishing area for residents of the Greater Victoria Regional District. This 8.4 hectare lake with a maximum depth of 16 metres is part of the Mount Work Regional Park.





Photo: Ivan Hunter

Five Lakes and a Ghost

Our watershed contains five lakes and a ghost lake. Prospect, Killarney, Maltby, Little Maltby and Durrance are still with us. Alas, Heal is no more.

Anyone who has glimpsed the snow-capped Olympics over Prospect Lake or seen the mist rise on Maltby or watched the mergansers on Killarney knows the beauty of a lake. The expanse of water, smooth and reflective or rippled and busy, is the showy part of the water in our watershed. The creeks and streams that flow into the lakes and take the water to the sea at Tod Inlet are more intimate views of the water. A mink working its way upstream, a mallard with her family of yellow and brown fluff heading down to the lake, a heron standing so still by the side of the stream all remind us of the busy life that goes on in the streams. Perhaps the least obvious part of the water system is the groundwater, which we do not see but we certainly know about when our wells run dry or get polluted. All these views of the water are views of one entity. Each part is affected by what happens to any of the parts.

Because lakes are the showiest parts of our water system, it is there that we first notice problems arising. The concerns that have been expressed about the quality of water in Prospect Lake over the past thirty years are concerns for the whole watershed. In order to address these concerns we have to look at the whole watershed. How are we living in it?

What are we doing to protect the water that passes over, under or through the land on which we live? Judging by the pollution in Prospect Lake (see article by Adriane Pollard on page 8), many of us in the watershed are doing things, often unknowingly, which affect the water as it passes us. We all need to learn more about how we can live here without causing dreadful things to happen to our groundwater, streams and lakes.

— MARY HAIG-BROWN

Durrance

Killarney

Little Maltby

Maltby

Prospect

MARY HAIG-BROWN is a long time resident and a member of The Friends of Tod Creek Watershed.

Watershed Gallery



Woody Thomson photographed this Great Blue Heron at Maltby Lake. We are interested in publishing any local pictures you may wish to share. Please contact us.

Learning from Heal Lake

In the summer and fall of 1991 the Capital Regional District (CRD) drained Heal Lake to expand the regional landfill. As might be expected in a natural lake on the coast, the exposed sediments revealed many large logs, superbly preserved, to the point that they had to be cut with a chain saw. As the lake-bottom mud was removed, my students and I sampled these logs and the sediments to study the history of the surrounding landscape and climate stretching back to the melting of the region's glaciers 13,000 years ago. The excellent preservation of numerous visible and microscopic plant fossils and annual growth rings in tree sections provided an unparalleled opportunity to carry out a comprehensive investigation of the history of our area. Greg Allen at the University of Victoria studied the pollen remains, while Qi-bin Zhang looked at the tree rings, both working toward graduate degrees in the University's School of Earth and Ocean Sciences.

Uplands on southern Vancouver Island were free of glacial ice before 13,000 years ago, and the Heal Lake area between 12,000 and 13,000 years ago. Heal Lake at about 128 metres above sea level was located well above the limit of marine inundation (about 75 m). Marine water deposited the heavy clays in lower elevations of the Tod Creek valley.

In the lake basin the 5-10 metre thick sequence of sediment included mostly a fine textured jelly-like material called *gyttja* (a Swedish word) interrupted midway by greyish white volcanic ash and near the base by a thin silty zone. *Gyttja* is lake muck. The ash was deposited from the atmosphere about 6,800 years ago when Mt. Mazama erupted in Oregon to form Crater Lake. The silty layer corresponds with a sudden and profound cooling and instability about 10,900 years ago. The lake was ringed by a peat deposit formed from poorly decomposed plant debris in shallow water.

Pollen analysis of the lake sediments revealed the following vegetation history for

the area. During an initial stage of cool and dry climate, 13,000-10,900 years ago, lodgepole pine woodland or forest occupied the area. We even uncovered cones of pine in the lake's deepest sediment. Shrubby alders predominated briefly for about 500 years until 10,500 years ago during a brief cold spell. Pieces of lodgepole pine tree trunks ended up in the lake at that time. Rapid warming at 10,000 years ago led to the appearance of Douglas-firs in the region. A climate warmer and drier than today from 7,000 to 10,000 years ago fostered patches of Douglas-fir woodland in a landscape of grasses, bracken fern and rocky knolls. Douglas-fir forest and wide-ranging oak stands covered our area 4,000-7,000 years ago as the climate cooled and moisture increased. Between 3,000-4,000 years ago modern Douglas-fir forests took shape and western redcedar became an important woodland species. Abundant logs of Douglas-fir and a few logs of redcedar bear testimony to these forests of the last 3,000 years.

Qi-bin Zhang's study of the Douglas-fir tree rings going back to almost 5,000 years ago suggest that spring moisture varied markedly over the interval. Of greatest interest is a sudden and persistent drop in the growth rate (change from fat to very thin rings) about 3800 years ago. Exactly what this means is not yet clear, but it seems to have occurred at about the same time as climate throughout north western North America shifted from one state to another. From this we suspect that climate does not change gradually but rather does so suddenly, a lesson we should heed with the threat of global warming over our heads. Incidentally, the tree-ring record from Heal Lake has proven to be one of the longest in the world.

One small lake, one great story, and probably more to come. — RICHARD HEBDA



An aerial view of Hartland Landfill. The former Heal Lake (current Phase 2 filling area) is circled. Brentwood Bay and the Saanich Inlet are at the top of the photo. Photo: CRD Environmental Services

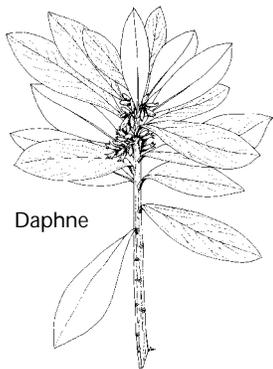
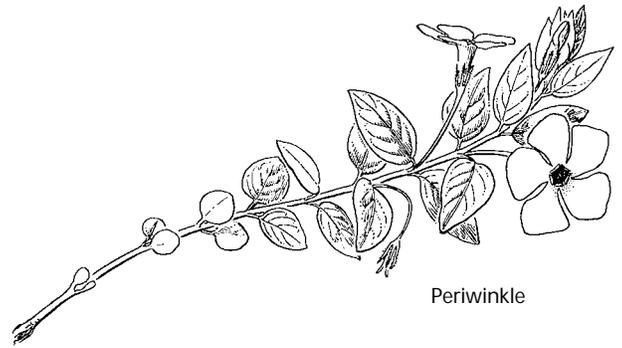
The tree-ring record from Heal Lake has proven to be one of the longest in the world.

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RICHARD HEBDA is a long time resident in the watershed. He is Curator of Botany and Earth History at the Royal British Columbia Museum and is an Adjunct Associate Professor at the University of Victoria.

natural history

Space Invaders



The hit list

Scotch broom
(*Cystitis scoparius*)

English ivy
(*Hedera helix*)

Himalayan
blackberry
(*Rubus discolor*)

Periwinkle
(*Vinca major*)

Spurge Laurel
(*Daphne laureola*)

Morning glory
(*Calystegia sepia*)

Giant knotweed
(*Polygonum
sachalinense*)

Holly
(*Ilex aquifolium*)

Purple loosestrife
(*Lythrum salicaria*)

Plants are great world travellers. Hitchhiking via wheels, hulls, clothes, freight, grain shipment and ballast, going first class in seed packets, botanical shipments and tourists' luggage, plants find their way around the world. Numerous immigrant plants whose ancestors called Asia and Europe home, have settled our region. During a recent browse through *Northwest Weeds* by Ronald J. Taylor, I took a random sample of 25 common 'weeds' — 23 were non-native. Many of these immigrant plants are reasonably well-behaved, existing alongside native plants or inhabiting primarily sites in which the indigenous flora has already been destroyed by human activity — e.g., roadsides, fields, powerlines and gardens.

At best these plants are beautiful; at worst, agricultural pests. Some, however, are thugs of the worst kind, extending their colonizing activity with ruthless efficiency into undisturbed habitat, crowding out the native inhabitants and setting up monocultures as destructive as any produced by humans. Our most notorious local thugs are, of course, Scotch broom and English ivy. Liking hot sunny sites, broom thrives in our most endangered ecosystem, Gary Oak uplands, destroying all the native species that grow beneath the trees. Preferring it shady, ivy spreads a smothering carpet over the understory plants of Douglas-fir forest, as well as ramping up the trees themselves, eventually killing them. Somewhat less invasive, but still thuggish, are blackberry, periwinkle, spurge laurel, morning glory, giant knotweed and holly.

Wherever possible, these plants should be removed from our properties and parks. It can

take several years of hard work to eradicate them, but the return of our native spring wildflowers is a joyous reward. Along our waterways, a close watch should be kept for purple loosestrife, a pretty plant with spires of purple flowers that forms dense, impenetrable colonies in boggy ground, destroying all the original vegetation and its attendant community of creatures.

Search and destroy!

— NAIRN HOLLOTT



Removing English ivy to prevent it killing the tree.
Photo: Shelagh Levey

Birds in Winter

“Oh dear meee”, sung to the tune of “Three Blind Mice”, the call of the golden crowned sparrow signals the nip and storms of winter. The fluid slide of migration is ending and winter business is at hand. Here in the Tod Creek watershed our winter bird population is considerable and affords glimpses into fascinating behaviours.

Many of us choose to feed our winter birds as an on-going activity. But what can you do to help out temporarily in a snow dump or an ice storm?

- Birds enjoy plain uncooked oatmeal (not the instant type), other uncooked grains, cornmeal or corn grits. Just sprinkle it in a safe cleared area or under shrubbery.
- Better still, melt a bit of leftover fat or peanut butter, add oatmeal (etc.), cool and crumble it out.
- Chopped unsalted nuts and unsalted sunflower seeds are eagerly welcomed as are dried fruits (raisins, etc.), frozen berries, apples cut in half, and leftover scrambled or other egg bits. The shy varied thrush might visit for these!
- The Anna’s hummingbird is a year-round jewel. I feed a solution made by bringing 3 parts of sugar and 5 parts of water to a

boil and then cooling it. If you start to feed it, it is necessary to continue.

- Most importantly, please be responsible and keep your cats indoors.

Many excellent bird books are available at libraries and bookstores. My favourite at this time of year is *A Guide to Feeding Winter Birds in British Columbia* by Bob Waldon.

— BECKY SHAW

Did you know?

- In winter many of our birds, such as chestnut backed chickadees, nuthatches, woodpeckers and some sparrows, use last summer’s nest boxes for night roosts. Flickers regularly use our wood duck boxes for night roosts and will pop into them during particularly wet days, peering out at the sheeting rain.
- Each year, the chickadee brain builds itself a new map of stash sites. In the fall most of those peanuts and sunflower seeds whisked away from your feeders and hidden, will be retrieved, often into summer nesting. (Quick lunch!)
- Birds pick up the sub sonic vibrations of approaching storm systems, giving them a head start in finding food and shelter.



BECKY SHAW is a 32-year Prospect Lake resident who watches birds on and around the lake.

Identifying Winter Birds

The **Rufous-sided Towhee**, a large member of the sparrow family, is similar in size to a robin. The male has a black head and chest, white belly and red eyes. Its sides are a rufous red, its back spotted with white, and it has white feathers in the corners of the tail. The black is replaced with brown on the female.

Towhees fly close to the ground and can often be seen searching for insects in dead leaves. Nests are usually on the ground, hidden in dense thickets where dead leaves may have been trapped. If you are prepared to leave an area of underbrush, you will be rewarded with towhees to enliven the winter.

—SHELAGH LEVEY



Photo: Bruce Whittington

Our migrant birds and coffee — what’s the connection?

Rufous hummingbirds were the first of our summer birds to leave the watershed for southern climes. Males left at the beginning of July, followed by females and young, two or three weeks later. What a hazardous journey they face, often thousands of kilometres down the Pacific Flyway. The tiny birds need to



contend with water crossings, variable weather, pollution, chemical sprays, predators, tall lighted buildings at night, and the need to find food to sustain them along the route. If they overcome these difficulties and complete the journey to their winter areas, some of

Continued, page 6

Coffee and Birds
continued from page 5

them will find the natural habitat replaced with roads and buildings.

In recent years birds have been finding sanctuary on coffee plantations, but this refuge could be short lived. Coffee was traditionally grown under the shade of tall trees that provided ideal canopies for wildlife. Recent manipulation of coffee enables it to be grown in full sun with no need for shade trees. Agribusiness has endorsed sun grown coffee because it produces higher yields — at least in the short term. Methods needed to grow sun grown coffee takes its toll on the land.

The economies of sun grown coffee is a threat to small farmers and their families, who generally grow organic coffee on small lots under tree canopies that provide habit for migratory birds and native species. The designation “fairly traded coffee” guarantees that small farmers have received a decent return. It costs a little more but is gourmet quality.

Consumers have power! By purchasing organic, shade-grown, fairly traded coffee, and asking for it in cafes and restaurants, we are supporting native people, the environment, and wildlife.

—SHELAGH LEVEY

where we live



The History of Maltby Lake

Maltby Lake (which our family has always called Highland Lake), is a 5 hectare spring fed, privately owned lake. It drains to the north, through a very large wetland surrounding “The Pothole” as we call it. On the maps it is called Little Pete Lamb, Kate, or Little Maltby — it would be interesting to know the origin of these names. Little Maltby drains into Bleathman Creek and flows to Prospect Lake.

Big and Little Maltby Lakes are surrounded by 70 hectares of forested and rocky land owned jointly by my mother and her four siblings. Most of the land parcel has been in our family for over 100 years.

Thomas and Richard Maltby were the original owners (1873) of a small parcel bordering the southwest portion of the lake. My great-great grandfather Henry Dumbleton later bought the majority of the current land parcel from the then surveyor general, Joseph D. Pemberton, whose son, Fred. B. Pemberton, married my maternal great grandmother. Dumbleton’s original Hunting Lodge still overlooks the lake and is now much expanded as The Family Cottage. In 1941, my grandfather, H. Cuthbert Holmes, purchased small land parcels to complete the present acreage. As a boy I recall a dilapidated wharf, once used by a butcher named Hubbard, who ran an abattoir high above the south shore. “Benson’s Rock” may have been named after a local farmer. “Milk Rock” is so named because my great grandparents used to row across and pick up milk delivered there by Charlie Dumbleton, who lived on Pike Lake.

My wife Carmel and I live in The Barn (built in 1928, converted in 1958) just east of the Family Cottage. One uncle uses The North Cottage (built around 1940), another The A-Frame cabin built on Benson’s rock in 1958. In 1978 a small rental building, Maltby Farm, was added southeast of the lake.

The land, to my knowledge, has been patch-logged four times — in the early 1900’s, in 1935, 1972, and 1990. All regeneration has been natural. In 1973 three University of Victoria students studied Maltby Lake for their limnology theses, which R. G. Langford amalgamated into a report to Saanich. A UVic doctoral thesis on controlling bullfrogs is just concluding, and four Camosun students have just finished a year-long baseline assessment of the big lake. As some of the owners now wish to subdivide their shares of the property, Enkon Environmental has recently undertaken an overall assessment of the ecological features of the entire property, as required by recent Saanich bylaws. In August, 6-8 mm diameter freshwater jellyfish in Maltby Lake were found and photographed. — WOODY THOMSON

As a fourth generation Victorian, WOODY THOMSON has spent most of his childhood summers at the lake, and has lived there permanently for over 32 years. He is the great-great grandson of the Hudson Bay Company’s map-maker and surveyor general J. D. Pemberton, and also of Henry Dumbleton, the original owner of the Maltby Lake property.

Prospect Lake Water Quality

Over 40 years of study

Prospect Lake has been watched closely by people for as long as people have been near it. The First People came here to gather camas bulbs, berries and probably wild fowl. In the sediments of the lake are ashes from ocean spray and other native vegetation as a result of the annual burning of these bushes to provide open space for camas to flourish. Later, settlers came and looked to the lake as a source of water for crops and live stock. With the coming of the Interurban Railway, the lake became a desirable place for summer cabins, and many were built along the shoreline.

Lake water was no longer considered fit to drink... around 1970 city water was brought to lake properties.

As Victoria grew and access to the lake became easier, the summer cabins became year round residences. This resulted in the lake being used by many people for drinking water, swimming, boating, fishing and sewage disposal. This human use has led to many studies of the lake water. The earliest of these were done by B.C. Fish and Wildlife Branch in order to facilitate the stocking of the lake with trout.

Eventually the area around the lake was so built up that the lake water was no longer considered fit for drinking and around 1970 city water was brought to the properties along the lake. However, residents were still concerned about the degradation of the lake for practical and esthetic reasons. Swimming, boating and fishing were in jeopardy and the looks and odour of the lake were of concern. Residents, through the Prospect Lake Community Association, attempted to have sources of pollution identified and mitigated. Information from student research papers pointed to septic systems as a possible source, but a systematic study was not done.

In February of 1989, as President of the Prospect Lake Community Association, Don



Photos:
(Opposite page) Looking east across Maltby Lake.

(Top) My grandfather Cuthbert Holmes with his younger sister and brother, circa 1914.

(Middle) Pemberton family teenagers, including my grandmother Philippa on a sinking raft, July 1915.

(Bottom) Old Dumbleton Hunting Lodge at Maltby Lake, circa 1928.

Sanford wrote to the Minister of the Environment asking for the Ministry to undertake an assessment of the water quality of the lake. The Ministry offered assistance but no funding. Many visits to Ministry offices and letters to various departments were followed by a letter to residents from Don Sanford asking for funding from the residents to cover the costs of a water quality profiling. Many residents responded with cheques and promises but the goal of \$5,000 was not reached. In October, 1994, Rick Todd, on behalf of the Community Association, wrote to the Mayor and Council of Saanich, repeating the concerns of 25 years earlier. Saanich responded with inquiries to the CRD Health and a series of public meetings.

In 1999 a draft Action Area Plan addressing the water quality concerns was presented at a Public Meeting. There was considerable public controversy regarding some of the measures suggested. A review committee made up of approximately 60 residents and two Saanich planners, Pam Hartling and Adriane Pollard, met throughout the winter of 1999-2000. The revised Action Area Plan, Prospect Lake/Tod Creek Action Plan: Protecting Water Quality in the Watershed, reached Council on August 14, 2001, where it was passed unanimously.

The plan listed 13 specific strategies to be taken to improve the quality of the water in the watershed. Strategy 7 was to "stop nutrients from septic systems from entering water-courses." In order to demonstrate that this was indeed a problem a study was commissioned to collate information already gathered, report on current hydrology and water quality conditions and make recommendations for further study to fill gaps in current data. This job was done by Hans Boerger through Habitat Acquisition Trust. Boerger's report, Prospect Lake; Water Quality and Lakeshed Assessment, includes copies of as many previous studies as could be found.

Gaps in information were noted and a further study was commissioned by Saanich Planning to answer the question, "Are septic systems making a significant contribution to the nutrient loading of Prospect Lake?" Richard Bailey of ENVIROsoil Services Inc. carried out the study. The results of the work are very interesting.... — MARY HAIG-BROWN

2002, Saanich Funds a New Report

The Results are in....

During the Prospect Lake/Tod Creek Action Plan process, it became apparent that there were two camps when it came to septic systems around the lake: those who felt certain they were a source of pollution, and those who didn't. In the end the Review Committee decided that we needed to investigate techniques and funding for determining the impact of septic systems on Prospect Lake water quality (see strategies 5 and 7 in the plan) before taking any steps towards increasing regulations.

Saanich Council approved the funding of a study to determine if septic systems around Prospect Lake were a significant contributor to the nutrient loading of the lake. ENVIROsoil Services Inc. submitted a proposal to take 30 near-shore water quality samples to answer the question and were awarded the contract. Along with the usual parameters, such as phosphates and temperature, parameters specific to human waste were assessed (staphylococcus).

A 46 page document (plus appendixes) was submitted July 2, 2002. The report found that staphylococcus was present, "...indicating that sewage effluent is a significant source of contamination of Prospect Lake". Moreover, samples taken in Killarney (Meadowbrook), Fraser and Bleathman Creeks were high in most parameters. "This indicates that these creeks are large contributors to the overall contamination of Prospect Lake, possibly approaching the cumulative impact of septic systems in the rural lakefront zone." ENVIROsoil Services Inc. made recommendations for further water quality study, particularly up the creeks, and investigation into individual septic systems.

Please be aware that while sample locations are shown on the map, there is no evidence as to which properties have dysfunctional septic systems. The methodology was designed to determine the type of contamination, not the point source.

Local resident (and recipient of the 2002 Environmental Achievement Award), Mr. Art Dimock, assisted in this project during the sampling stage.

A one paragraph summary does not do justice to the report and I recommend that you read the report, which is available at the Planning Department, or you can purchase copies for \$5. The Friends of Tod Creek Watershed and the Prospect Lake Community Association both have copies.

You may be wondering what will happen as a result of this report. The best answers are available in the implementation plan of the Prospect Lake/Tod Creek Action Plan.

— ADRIANE POLLARD

Adriane Pollard is Manager of Environmental Services, Saanich Planning Department

4 ways to make a difference



Providing a pervious cover like this gravel driveway allows water to filter into the soil and water table instead of rushing into storm drains or directly into the lake.



Maintain septic system and regularly empty tank. This well-managed tank shows a thick layer of composted, soil-like material on top of the surface sludge.



Non-motorized and electric boats are non-polluting and make more sense on a shallow lake that is only 72 hectares and has a very low 'flush out' or water replacement rate.



A natural shoreline not only protects the lake but provides a great habitat for wildlife. Trees and low-maintenance native plants provide a shoreline buffer that helps to filter out pollutants and prevent erosion. Avoid the use of fertilizers, pesticides, and herbicides near water. Also be aware of run off from washing vehicles, or emptying hot tubs.

Septic systems explained

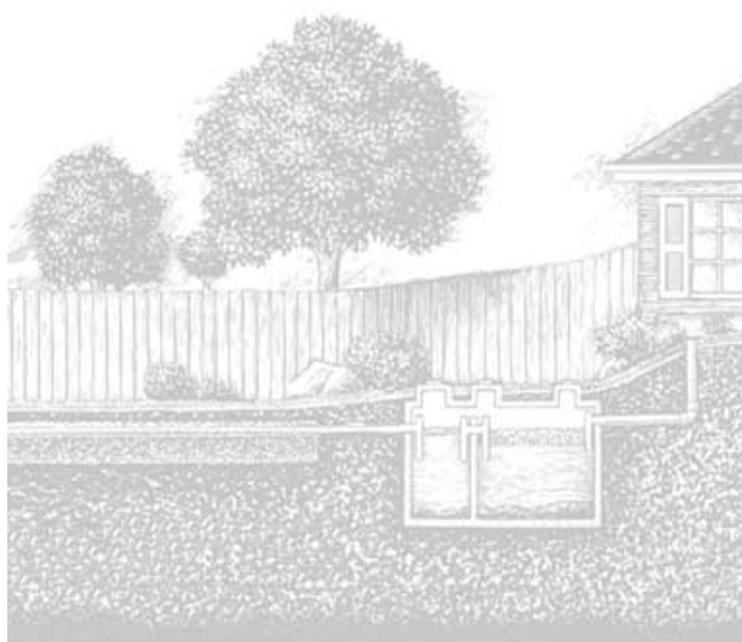
The Prospect Lake Community Association invites you to a neighbourhood septic education event. Learn about a range of onsite technologies. Find out about current and planned regulations. Discuss local onsite related issues. Talk to the experts. View different onsite technologies on display. Discover environmentally friendly design at the Vancouver Island Technology Park — an opportunity you won't want to miss!

Location: Vancouver Island Technology Park (VITP) 4464 Markham Street

Date: Saturday, November 23, 2002

Time: 9:30 am - 4:30 pm

Program: Presentations and panel discussion at 10:30 am and 1:30 pm. Tours of VITP at noon and 3:00 pm. Displays open all day



This event is made possible by assistance from the Capital Regional District, District of Saanich, Environment Canada, the Ministry of Water, Land and Air Protection and the Vancouver Island Health Authority. For more information, call Mary Haig-Brown at 479-8801.

Demystifying Saanich bylaws —Lakes

The Prospect Lake/Tod Creek Action Plan took a watershed approach to answer the community's concerns regarding the water quality of Prospect Lake. While the entire watershed benefits from good environmental management, it is the lake that is the receiving body for the contaminants upslope and upstream. This article is a summary of the bylaws that protect the lake.

In Saanich, lakes are considered watercourses and as such are protected under the **Watercourse Bylaw** (7501). The Watercourse Bylaw prohibits activities which might pollute or change water flows. Council will soon consider a bylaw amendment which would make nutrients a prohibited waste.

Under the **Zoning Bylaw** (6120), Council recently approved new regulations to allow permeable paving for off-street parking surfaces. Permeable surfaces allow stormwater to infiltrate into the soils rather than be whisked off into a pipe to the lake. Most properties around the lake are zoned A-1 and have a 7.5 metre minimum setback for buildings. Keep in mind though that the **Deposit of Fill Bylaw** (7058) prohibits the deposit of fill on land less than 49.3 metres in elevation around Prospect Lake. Any damage that is caused to a watercourse due to filling or grading must be repaired.

The Prospect Lake/Tod Creek Development Permit Area (DPA) is specifically designed to protect water quality and riparian habitat in the watershed. Guidelines are given to reduce site disturbance, loss of vegetation, run-off, and pollution. Landowners must apply for a permit before subdividing, constructing buildings or altering the land within 30 metres of the lake or other watercourses. Riparian restoration may be used as a tool to mitigate impacts from development.

Fisheries, wildlife and water resources are protected under a number of federal and provincial Acts, including the *Fisheries Act*, the *Water Act*, the *Waste Management Act* and the *Wildlife Act*. The federal Department of Fisheries and Oceans and the provincial Ministry of Water, Land and Air Protection are responsible for administration of these Acts. It is best to check with these agencies before building or working in or around watercourses as well as other environmentally sensitive areas.

While Saanich uses these bylaws to set standards for development, education and awareness is seen as the key to good stewardship around the lake. If you have any questions about the bylaws that protect lakes or stewardship opportunities, please call me at 475-5494 ext. 3556. — ADRIANE POLLARD

ADRIANE POLLARD is Manager of Environmental Services, Saanich Planning Department. She is an ecologist and a member of the Planning Institute of British Columbia.



Upcoming Events

First Wednesday of the month

The Friends of Tod Creek Watershed meet at Prospect Lake Community Hall, 7:30 p.m.

Second Wednesday of the month

The Prospect Lake Community Association meets at Prospect Lake Hall, 7:30 p.m. If you can suggest speakers/presentations, call Sherron MacPherson, 479-3972.

Saturday October 26 10 am – 2 pm

Flea Market

Prospect Lake Hall. Recycling at its best! Come and get some bargains, have lunch and meet your neighbours. Rent a table for \$10. Lois, 479-7070.

Saturday November 9 6:30 pm

Musical HATs at the Community Hall

Habitat Acquisition Trust's fundraising

event. All proceeds go to support HAT's conservation work. Great list of raffle tickets and good food and drink. Tickets \$10. 995-2428.

Saturday November 23 9:30 am – 4:30 pm

Septic Systems Education Event

Vancouver Island Technology Park, 4464 Markham Street. Approximately 12 firms will be demonstrating the latest on-site septic systems. The CRD, Saanich, and Prospect Lake Community Association are sponsoring this event as a follow up to the recent Prospect Lake Water Quality Report, that points to certain areas of the lake and inflow streams being contaminated with human sewage. Information will be provided on regulations, costs, and ways to judge the effectiveness of the onsite systems being demonstrated.

Resources

Water Quality Studies

Copies of the latest study are available at Saanich Planning Department for \$5.00, or borrow one from Mary Haig-Brown, 479-8801. Also ask Mary about borrowing a copy of Hans Boerger's report.

Saanich Community Naturescape Challenge.

Saanich challenges all residents to purchase a Naturescape BC kit (\$21/387-9769) and maybe win a prize for creating environments for native fauna and flora. Angela Evans, 475-1775.

community report

Mountain Biking

Trail Building at Mt. Work Hartland Park

The Southern Island Mountain Bike Society (SIMBS), does trail maintenance every third Sunday of the month at Mt. Work Hartland Park. The crews keep the busy bike friendly trails in good shape and design and build new trails that are approved by CRD parks.

Come and learn how the art of trail building has evolved to handle the demands of mountain biking. Interested people meet at 8:45 a.m. in the parking lot at the end of Hartland road. Bring sturdy footwear.

To register or for more information on mountain biking, go to simbs.com.

—GREG CARMICHAEL

Greg can often be seen cycling on our country roads. He has lived most of his life in the watershed. Greg played soccer with the Prospect Lake Soccer Association when it first started in the mid sixties and was a Colonist paper boy for several years after getting his first bike in 1969.

Streamkeepers



The Stream Team. Left to right: JC and Elysia.

Fifteen year old ELYSIA GLOVER regularly helps The Friends of Tod Creek Watershed to monitor aquatic insects on Meadowbrook Creek. She attends Claremont Secondary School where she is a member of the swim team. Her hobbies are baking and cooking, music, and anything to do with water.

This past June, my sister, mom and I took part in a Streamkeepers course, taught by Susan Lowe and Jennifer Sutherhurst from the Department of Fisheries and Oceans [and organized by the Friends of Tod Creek]. It was held during the weekend of the 8th and 9th, from nine a.m. til 4:30. In those two days we were taught everything from identifying a watershed on a map to monitoring the condition of a stream or creek. We were taught all of the stream keeper lingo and found out how to test oxygen levels, set fish traps, count bugs (benthic monitoring) and how to check a stream or creeks overall healthiness. The group went out to

Tod Creek to refine our stream-keeping skills and there we checked out riparian zones (vegetated areas beside watercourses), looked for large woody debris and made sure the creek contained varying sizes of rocks and gravel good enough for spawning fish. We checked the speed at which the water was moving with the oh-so-scientific tennis ball test and looked for an abundance of pools and riffles.

The two instructors were enthusiastic and did a great job answering any questions, comments, or concerns we had over the weekend. They even got us through the daunting task of filling out the equation-loaded data collection sheets! All in all, it was a great weekend and I'm sure everyone who came out had a great time. I know the three of us had a ton of fun meeting new people and developing our skills. We all came away from the course knowing a whole lot more and ready to tackle any water-course in need!

—ELYSIA GLOVER

Friends of Tod Creek and supporters launch Watershed Connections at a barbecue.



meet your neighbours

Ghazi and Marian Underwood



West Saanich Road in the first decade of the last century.

BC ARCHIVES 96141

We appreciate the generosity of the anonymous donor who made this project possible and the support of Habitat Acquisition Trust and the Municipality of Saanich.

EDITOR
Shelagh Levey

GRAPHIC DESIGNER
Frances Hunter

Special thanks to calligrapher and naturalist Arlene Yaworsky who designed our masthead.

Opinions expressed in *Watershed Connections* should not be construed as being the consensus opinion of the Friends of Tod Creek Watershed. Each article is the responsibility of the author.

Additional copies are available at Oldfield's gas station.

Although it was one of the hottest days in August when I interviewed Marian Underwood, it was quite cool under the shade of the trees surrounding her house and ponds. The property, located behind West Saanich Road was bought in 1948 by Marian's husband, Ghazi. He was delighted when his offer of \$1,000 for 65 acres was accepted!

The Underwood property has since been reduced to 13 acres. Many years ago 11 acres paid the plumber's bill, additional acres were sold throughout the years, and their daughter now lives on acreage next door.

Ghazi comes from a military family. One of his brothers was captured at Dieppe. His father served in the British Army in Turkey, where he was so impressed by Atatürk, the founder of modern Turkey, that he named his son after him.

Marian was born in Prince Rupert and moved to Victoria as a child. She worked in the Communications Department at the Esquimalt Dockyard. Marian and Ghazi moved to the watershed in 1953. At that time there was so little traffic on West Saanich Road that Ghazi jokes, "You could have sat down and eaten your lunch in the middle of it." Marion remembers one snowstorm when Ghazi hitched their pony to a sled and drove down West Saanich Road.

The Underwoods' property includes 3 acres of wetlands, which attracts a variety of wildlife. "Deer, squirrels, mink, the occasional otter, woodpeckers, kingfishers, ducks — we enjoy them all. It's all nature and we're interested in saving it", says Marian. —SHELAGH LEVEY

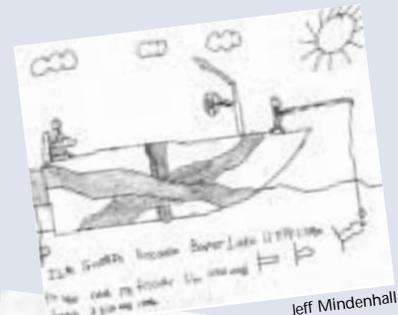
kid's corner

Dear Watershed Kids,

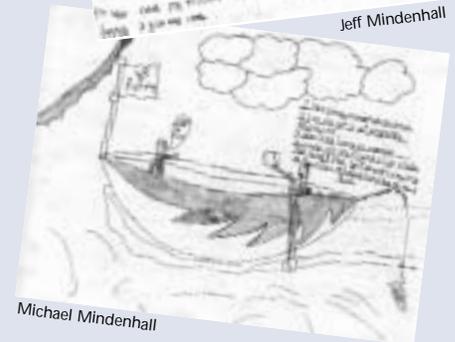
In the last issue I talked about watersheds and how they are often shaped like a bowl — some like steep sided mixing bowls and others like shallow dishes. Whatever their shape, when the rain falls in a watershed like the Tod Creek watershed where we live, the water runs into streams and lakes and soaks into the ground. Here is the address for an interesting kids' page about watersheds: www.epa.gov/owow/kids.html

I asked you to send me pictures of what you enjoy about living in our wonderful watershed. Here are pictures by the Mindenhall brothers, Jeff and Michael.

Your watershed friend, *Shelagh*



Jeff Mindenhall



Michael Mindenhall

Watershed Kids

Remember to send us your artwork and enter the draw for a tour of the watershed in a Cessna airplane.



How about drawing a picture with felt pens to show where you live in the watershed. Write two or three sentences to say why you like living where you do.

Place your picture and writing in an envelope and leave it in the mailbox marked "Hunter" at 203 Goward Road. Please include your name, age, and telephone number.

An Invitation to Join the Friends of Tod Creek Watershed

The Friends of Tod Creek Watershed are a group of people who live in the area and come together for companionship and to engage in activities that benefit the watershed. Their mission statement is to protect and enhance the integrity and biodiversity of the watershed. Action groups are currently working on: well water safety; mapping; trail building; water quality monitoring; riparian planting and restoration. Everyone is welcome to join the group. Meetings are held on the first Wednesday of each month, September to June at Prospect Lake Community Hall, 5358 Sparton Road at 7:30 pm. For information, please phone 479-8801 or 479-5647.