

Arrowsmith Watershed Stewardship Team

Englishman River
Watershed Recovery

Project Report
May 2002 / April 2003

We sincerely appreciate the Pacific Salmon Foundation and the Vancouver Foundation for their financial support for this initiative.

Stewardship and Education Component

Looking at the BIG PICTURE

The 'Team's' approach to the Englishman River Watershed Recovery Project (ERWRP) is that all of the land uses in the drainage basin have an effect on the downstream environment. In order to restore the fish stocks in the river, we will need cooperation and commitment from all of the participants and landowners in the watershed area.

The Arrowsmith Watershed Stewardship Team is committed to creating more awareness about land/water issues and encouraging better practices in watershed stewardship.

Working toward a healthier Watershed

Public education is an essential component in the Recovery Plan. The 'Team' identified 674 rural and 890 urban addresses in the watershed. The hand delivery of newsletters, brochures, and localized neighborhood maps resulted in significant contact with the residents and landowners.

Bus Tours a BIG Success.

The twelve passenger four wheel drive bus made seven tours of the watershed. Hosted by Gary and Ronda Murdock, of Pacific Rainforest Adventure Tours. The trip took the participants on an informative three-hour journey visiting the many perspectives of the Englishman River system. Our guests included our two MLA's (Judith Reid is Minister of Transportation) The two Mayors and new councilors, The Regional Board Chair and several Directors. (Previous tours hosted our M P and many regional and municipal staff). Considerable on site information was shared and we received very favorable feedback.



Most of the land within the watershed is privately owned, approx. 2/3 in active forest resource land, 1/3 rural and urban residential / mixed use.

OLD MAPS UP THE CREEK

One surprising discovery early into the project was that most of the existing maps of the watershed were quite inaccurate. After almost a year of investigation we have identified 18 significant mapping errors that should be corrected. One example misplaced the area within the watershed by approx.

4 sq. kilometers, consisting of more than 100 properties. Other maps show creeks where no creeks exist, water flowing uphill, and water that doesn't flow anywhere.



A SIGN OF THE TIMES

The 'Stewardship Team' installed almost 200 signs and location markers in the Englishman River Watershed. The roadside signs mark the **upstream** watercourses, ephemeral streams and tributaries, including drainage ditches.



THE ENGLISHMAN RIVER TRIBUTARY
And
THE ENGLISHMAN RIVER WATER RESOURCE AREA
The purpose of these signs is to create a local interest and awareness of connections between their neighborhood and possible effects downstream. The Location Markers are individually numbered to identify stream crossings and other significant sites.

Projects identified

Part of the public contact component included consultation with property owners about potential projects that would help to improve upstream water management. Fifteen prospective projects were identified, three of which were considered priority. Follow up visits, plans and proposals were drafted. One preliminary project was completed with funding and support from BC Hydro and the Ministry of Highways.

Regional recognition:

Following presentations by the 'Team' to the Regional District of Nanaimo, The City of Parksville, and the town of Qualicum Beach, all three jurisdictions passed motions recognizing the Englishman River Watershed as a drinking water supply area. This will *raise the bar* on water resource protection.

The Water Contact

Line provides an opportunity for residents and visitors to ask questions or leave comments about the area's water resources. The contact line telephone number is on the signs, location markers, and all of the handout material. Call 250 951 0909 for more information.

Accountability;

Project Cost Breakdown

May 2002 – April 2003:

Signs/ Mapping Project	\$ 3,900
Public Contact Project	\$ 4,100
Bus Tours	\$ 1,760
Video Footage	\$ 800
Project Co-ordination, Leadership, Administration	\$ 5,469
Total budget for Stewardship/ Education component	\$ 16,029

Video Record

A video record of the ERWRP projects was taken during the year. The tape can be part of an ongoing documentary.

The Englishman River is on the Endangered Rivers List. Steelhead stocks on the Englishman are at crisis levels. On many river systems throughout the Georgia Basin, steelhead returns are just 10 - 15% of what was observed in the 1980s.



Support Appreciated

We appreciate the support from many individuals, businesses and local governments:
ANTHONY KOERS AND ASSOCIATES ENGINEERING .. HERB MASSEK BC HYDRO .. QUALITY FOODS .. PARKS WEST PRINTING .. CITY OF PARKSVILLE .. BOB HERBISON .. PACIFIC RAINFOREST ADVENTURE TOURS .. REGIONAL DISTRICT OF NANAIMO / MAPPING DEPT. .. MARC GABOURY LGL .. ERRINGTON CENTER STORE .. MINISTRY OF HIGHWAYS .. GLOBAL GEOMATICS LTD. .. TOWN OF QUALICUM BEACH .. GEORGE KLEMM .. MAIN ROAD CONTRACTING .. J K CONTRACTING .. MICHAEL GIERRINGER / PARRY'S CFM SPECIALTY MILL and MANY OTHERS.

Storm surges With the help of detailed precipitation records, and the up to the minute water flows in the river, we are able to determine the resulting storm surge factors. The area of modified land in the watershed is increasing; this compounds the water run-off and significantly affects the creeks and river downstream.

Low flows, and in many areas no water flows during the summer months are the result of 'efficient' drainage practices upstream.

The ERWRP has created additional connections for the 'Team' on watershed related issues:

- ❖ Weyerhaeuser Watershed Assessment of the Englishman River system
- ❖ EBA hydrological assessment
- ❖ Water Land & Air Protection water quality testing in the Englishman River
- ❖ Gordon Buckingham water quality thesis of the Englishman River at Royal Roads University.
- ❖ R D N water protection plan
- ❖ Project engineering liaison with local & provincial governments.
- ❖ News media coverage
- ❖ Development planning input of 900 acre Block 564
- ❖ John Nuttall E R hydrological report and photo collection of the Englishman River

Volunteers in action

A considerable amount of volunteer time has been contributed to this recovery project. Team members have donated more than 300 hours of unpaid time during the past year.



Participation at local events.

The 'Team' participated with displays and information at several events including:

- ❖ Rivers Day
- ❖ Englishman River Estuary
- ❖ ERWRP open house
- ❖ Brant Festival
- ❖ Neighborhood Information Pot-Luck

Ditching the ditches

The draining of water from land, roads, rural, and urban areas is creating a compounding effect on the surface and subsurface hydrology. The concentration and channeling of water in ditches, culverts and storm drains:

- Lowers surface water tables
- Speeds up the storm surge downstream
- Limits infiltration and aquifer recharge
- Reduces the cleaning or settling-out of contaminants

Better practices and techniques should be used to lower the hydrological impact for future development and maintenance.

Person to Person The Stewardship and Education project has provided many opportunities for personal contact with residents, visitors, business and property owners in the area. These connections with several hundred people have allowed team members to explain the importance of watershed stewardship. In addition, these contacts have provided information about the state of land, water, fish, climatic changes, habitat, etc. which has been valuable.

Watershed model A three dimensional scale model of the 'Arrowsmith Watersheds' has been produced by Trentec Innovations Ltd. This can be used as an educational tool to demonstrate the causes and effects of the changing hydrology.

An Action Plan for the protection of the area's drinking water resources has been developed by the 'Team'. Many of the initiatives included in the plan could provide a considerable benefit to the quality and flows of the creeks and tributaries of the Englishman River.

Cause and Effect:

The Englishman River Watershed Recovery Project is into the third year with expenses in the range of \$600,000 – \$800,000 dollars. At this time, little has been done to fix the fundamental causes of problems. Many of the problems originate in the watershed above the anadromous sections of the creeks and the river. The effect is downstream with loss of habitat deteriorating water quality and flow. Actions to slow the watershed deterioration have to take place in order to make real progress toward healthy, natural, sustainable fish populations.

Public Participation 101 In order to gain the trust and cooperation with the majority of the public, landowners businesses and local governments, the focus of the Englishman River Watershed Recovery Plan has to be more encompassing. The management and governance in this area's, people, land, economy and resources is complex. The amount of interest and willingness to participate will be increased if we address the issues in the watershed from a multidimensional viewpoint.

Other Recommendations:**1. Acquiring land for water storage**

Private land in locations that could be utilized for constructed water storage, controlled recharge, or storm-water retention, could be acquired by lease, endowment, or purchase. There are many potential parcels of land, which are often of little value for development.

2. Wetland development

Surface water retention in the watershed is minimal. Many of the natural wetlands have been drained, reclaiming some of these areas and developing new wetlands will be beneficial to the resource.

3. Name that Creek

All creeks and ephemeral watercourses including excavated ditches should be given a name, for future identification. Schools and community youth groups could be invited to:

NAME THAT CREEK

e.g. PINE CONE CREEK ,RED WILLOWS CREEK, CAT TAIL CREEK

Maps would show these names and signs could be installed.

Low Impact Modifications LIM's. Making substantive improvements in the watershed will take several years. A number of simple, cost effective options to enhance in-stream habitat and water flow should be considered. These LIM's would be implemented on a seasonal, as needed basis to improve conditions for fish survival and reproduction. Because the creeks and the river profiles can change significantly during a single storm event, some of the currently used in-stream modification techniques are ineffective. Therefore a more innovative approach is needed to maintain a production capacity.

**Multi-level Approach**

We all need to take some responsibility for water resource protection:

- Resident and visitors
- Property owners
- Business and corporations
- Forestry and agriculture
- Municipalities and rural communities
- Provincial and Federal Governments

For more information Contact Trevor Wicks at the Contact Line 250 951 0909

Rewarding Good Practices

Provide a token acknowledgment (plaque, certificate etc.) for 'Best Practices' to developments that recognize the importance of sustainable land/water values.

Watershed Management Coordinator

An intergovernmental watershed management approach could see a position created for coordinator to manage the water resources for the entire watershed area. The position would include implementation of the activities to protect and sustain the water resources.

The funding amount required would be approximately \$25,000 per year from multiple sources including Local / Provincial Governments, and other interested parties.