Environment Canada Environnement Canada

WORKING TOGETHER FOR THE GEORGIA BASIN

HABITAT CONSERVATION TRUST FUND

BRITISH COLUMBIA

July 2004

Publication of Updated Sensitive Ecosystems Inventory Maps for East Vancouver Island and Gulf Islands

We are pleased to provide you with updated ***Sensitive Ecosystems Inventory (SEI): East Vancouver Island and Gulf Islands***[1] maps for your area. This second version of the SEI maps is an update of the maps that were published in 1997. The new maps identify those portions of the original SEI polygons that have been disturbed—by logging, urban or rural use, roads, trail(s), recreation, agriculture or industrial use—over the past decade. The disturbed areas identified have been retained on the maps (see red hatched areas) to increase awareness of the escalating loss of natural ecosystems and to encourage conservation of those that remain.

The areas of disturbance were identified by digitally overlaying the original polygons (identified on air photos taken primarily between 1990 and 1992) on more recent photographs taken in 2002. The SEI spatial coverage and associated attribute files were updated with information such as disturbance type, percent of polygon disturbed, and extent of polygon fragmentation. In addition, the intact remnants of each altered polygon were reviewed to determine if they still qualified for inclusion in the SEI. This update increases the value of the SEI to both current and potential users, and allows the amount, rate, and type of ecosystem loss since the original inventory to be quantified and summarized.

The results of this mapping project show an alarming trend. Over 8,800 ha (11%) of the area occupied by the nine SEI ecosystem types in the early 1990s had been disturbed (and considered to be no longer representative of the SEI ecosystem) by 2002. Over 1460 ha of disturbed area had originally been occupied by the seven sensitive ecosystems. Older forests had the highest rate of loss at 8.6% (915 ha) followed by riparian (4.6%), woodland (2.6%) and wetland (2.0%) ecosystems. The largest area of loss was 7,360 ha (16.4%) in the older second growth forest category. Losses due to fragmentation are currently being assessed and will add to these totals.

The loss figures above raise concerns over the rate and extent at which rare and ecologically sensitive ecosystems continue to be altered or lost in the eastern Vancouver Island and Gulf Islands region. This becomes even more of a concern when we remind ourselves that much of what we consider essential to human survival and wellbeing—food, shelter, fuel, fresh air, clean water, medicines, and more—depends on healthy natural ecosystems. The disturbing results of the SEI mapping are clearly a wake-up call for all land use decision makers, sending a strong message that a more strategic landscape approach to land use planning rather than an ad hoc, site-specific approach must be adopted in order to ensure the protection of the region's biological diversity.

Re-evaluation of Major Riparian Corridors and Other Areas

The original SEI mapping of riparian ecosystems avoided areas showing recent human disturbance. However, the linear corridors formed by riparian ecosystems comprise a continuous ecological unit with very high conservation values overall. Major riparian corridors were re-evaluated to reflect these values and to encourage land use decisions that consider entire riparian ecosystems as well as the larger watersheds of which they are a part.

---

[1] *The Sensitive Ecosystems Inventory (SEI) is a joint project of Environment Canada (Canadian Wildlife Service), Ministry of Sustainable Resource Management (Conservation Data Centre) and Ministry of Water, Land and Air Protection, also supported by the Habitat Conservation Trust Fund and Georgia Basin Action Plan.*

The updated maps include 256 new riparian polygons in major corridors such as the Cowichan, Chemainus, Koksilah, Nanaimo, Englishman, Little Qualicum, Puntledge, Quinsam, Oyster, Tsolum and Trent River valleys. Where riparian ecosystems were identified within an existing non-riparian polygon, the riparian ecosystem code was added.

For consistency, the new air photo interpretation was conducted at a scale of 1:10,000. Since this scale was larger than some of the original 1990s photos (many of which were between 1:15,000 and 1:20,000), more accurate interpretation was possible. However, budget and time constraints did not allow for a comprehensive re-interpretation of the entire study area at this scale. Where previously unidentified SEI ecosystems were noticed during the riparian re-evaluation, new polygons were added. Approximately 25 non-riparian polygons were identified, representing older forests, wetlands and seasonally flooded agricultural fields. A few older second growth forest polygons were also identified where they occurred adjacent to a sensitive ecosystem.

We encourage you to display and use these maps in addition to habitat atlas products that may be available in your area. Because habitat atlases contain many layers of data, SEI data is often not depicted in its entirety, and custom labels and associated information (such as the presence of a secondary ecosystem in a polygon) are not always present. The maps on this DVD provide quick and easy reference, and show all SEI polygons with colour coding, ecosystem descriptions, cross-hatching to indicate areas disturbed since the original inventory, full labels that include ecosystem type(s), as well as an indication as to whether or not field data is available for a particular polygon.

Hard copy maps can be purchased from Clover Point Cartographics (see attached order form). For digital files and/or the final report with results and summary statistics for this mapping project, please contact Jan Kirkby. We would appreciate receiving information you may have regarding changes or corrections to our SEI data, and encourage you to use the Information Change Form provided. For further information on the SEI or for copies of any SEI publication, visit the SEI website at: **http://srmwww.gov.bc.ca/sei.html** or feel free to phone or email (contact information below). We will be offering information and orientation sessions on the SEI disturbance mapping project soon, so please contact us if you would like to have a session your area.

We first brought the SEI project to the attention of local governments in 1993, then stating our objective ‘to identify areas of greatest ecological concern…to promote a proactive approach to land use decisions’. We expressed at that time a desire and commitment to provide scientific information to local governments and landowners to promote informed, ecosystem-based land use decisions, and to work together to explore ways of protecting remaining sensitive ecosystems. We reiterate that commitment, and hope that this update to the SEI maps will not only raise awareness of escalating ecosystem loss on the east coast of Vancouver Island and the Gulf Islands, but will also facilitate the development of comprehensive conservation strategies to ensure the protection of our remaining natural ecosystems through a landscape or ecosystem approach to land use planning.

Sincerely,

Jan Kirkby, MSc, RPBio
Landscape Ecologist, Canadian Wildlife Service

on behalf of the Sensitive Ecosystems Inventory Project
5421 Robertson Rd. RR1
Delta, BC V4K 3N2
phone:(604) 940-4657
cell (250) 616-3234 email: Jan.Kirkby@ec.gc.ca