

## Mapping Working Group Recommendation to the Resilient Saanich Technical Committee (RSTC) for Detailed Terrestrial Ecosystem and Sensitive Ecosystem Mapping

The RSTC recommends that the Sensitive Ecosystem Mapping for Saanich be updated as soon as possible, starting with all of Saanich inside the Urban Containment Boundary. This would include all of Saanich Parks and other lands that have natural or near natural areas. Terrestrial Ecosystem Mapping (TEM) would form the basis for providing a derived Sensitive Ecosystem Map.

The Sensitive Ecosystem Inventory project for southern Vancouver Island reported in 2000 based on field work done between 1993 – 1997. The resulting maps have not been thoroughly updated. Some refinements in the SEI mapping have been recently done, but many SEI polygons that may have qualified as sensitive ecosystems over 20 years ago may no longer meet the criteria. Sensitive ecosystem polygons are represented on a map layer in the Saanich Map GIS system, yet much of this mapping is either out of date or inaccurate. In order to properly develop a biodiversity strategy for Saanich, accurate information about the location and condition of sensitive ecosystems is required.

Additional considerations are recommended:

- Use of the TEM/SEI mapping method would mean that Saanich is using the same mapping tools that other jurisdictions use.
- The mapping must consistently follow the TEM/SEI standards, including that identified SEI polygons meet the requirement of being relatively unmodified<sup>1</sup>.
- A scientifically justifiable percent of identified polygons must be ground truthed.
- All of Saanich, including both private and public land such as parks would be mapped, initially within the Urban Containment Boundary. It is recognized that mapping private rural land is a challenge due to getting permission for ground truthing.

The RSTC recommends that an updated ecosystem mapping product will be created to provide a ground-based methodology for analyzing and conserving sensitive ecosystems in the District of Saanich. If Saanich agrees and decides that the mapping needs to be updated and changed, this is how we recommend doing it.

The mapping should follow the Standards for Mapping Ecosystems at Risk in British Columbia<sup>2</sup> with selected attributes, and also include the NatureServe Ecological Integrity approach.<sup>3, 4</sup> All polygons identified would be ranked according to size, landscape context and ecological condition.<sup>5</sup>

The mapping would be created at a scale to be determined on the basis of desired accuracy and cost. A scale of 1:5000 might be appropriate with a sampling intensity of (ideally) 25% (need to determine

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<sup>1</sup> Sensitive ecosystems that are in excellent or good condition are relatively unmodified. Ecosystems and ecosystem fragments that are in fair or poor condition are too modified to meet the criterion. See p. 43 of the Standard cited in Footnote 2

<sup>2</sup> [https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/standards\\_for\\_mapping\\_ea\\_r\\_version1.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/standards_for_mapping_ea_r_version1.pdf)

<sup>3</sup> <https://www.natureserve.org/conservation-tools/ecological-integrity-assessment>.

<sup>4</sup> Don Faber-Langendoen, William Nichols, Joe Rocchio, Kathleen Walz, and Joanna Lemly. July 2016. An Introduction to NatureServe's Ecological Integrity Assessment Method  
[https://www.natureserve.org/sites/default/files/publications/eia\\_2019.pdf](https://www.natureserve.org/sites/default/files/publications/eia_2019.pdf)

<sup>5</sup> see 4.4.2 Element Occurrence Rank Criteria from the Standard cited in Footnote 2

expected costs – will this give enough improvement to the existing TEM in rural areas and larger parks) It is recognized that ground-truthing on private lands in Saanich is challenging.

Mapping will follow the present site series classifications for the CDFmm and where possible, will also include mapping Garry oak classification units described in Erickson and Meidinger.<sup>6</sup> Where using site series classification is not possible, direct indication of Sensitive Ecosystem types, according to the SEI methods manual (McPhee et al 2000) will be used.<sup>7</sup>

Potentially, the mapping could be done in stages with natural Saanich Parks and other public lands being the first priority and then cover the rest of the municipality in stages, as funding is made available.

Types of Sensitive Ecosystems derived from this mapping will be accurate and clear when displayed on the Saanich Map system, along with selected component or attribute data from the new TEM.

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<sup>6</sup> Erickson, W.R. and D.V. Meidinger. 2007. Garry oak plant communities in British Columbia: a guide to identification. B.C. Ministry of Forests and Range, Research Branch, Victoria, B.C. Technical Report 040.  
[www.for.gov.bc.ca/hfd/pubs/Docs/Tr/Tr040.pdf](http://www.for.gov.bc.ca/hfd/pubs/Docs/Tr/Tr040.pdf)

<sup>7</sup> MCPhee, M., P.Ward, J. Kirkby, L.Wolfe, N. Page, K. Dunster, N. K. Dawe and I. Nykwist. 2000. Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands, 1993 - 1997. Volume 2: Conservation Manual. Technical Report Series No. 345, Canadian Wildlife Service, Pacific and Yukon Region, British Columbia.