# Fire History of Garry Oak and Associated Ecosystems on Federal Lands.

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Garry oak (*Quercus garryana*) ecosystems are one of the most endangered ecosystems in Canada. It is believed that only 5 percent of the original Garry oak ecosystems remain intact (GOERT, 2002). Garry oak ecosystems are home to at least 91 "at risk" species that occur in an area where natural processes have been severely altered. Land use pressure and global climate change will have a great impact on Garry oak and associated ecosystems. Already many natural processes such as fire have been altered and landscape connectivity is a pressing issue. Parks Canada has established a national park reserve in the Gulf Islands of southern BC and Garry oak ecosystems exist within the park and greater ecosystem. In order to manage the park (including active management) the understanding of fire history and baseline ecosystems are essential.

This Interdepartmental Recovery Plan, Parks Canada, and NSERC funded project will take an interdisciplinary approach to the understanding of fire ecology on federal protected lands. The study uses dendroecological and palynological methods to reconstruct the fire history of selected Garry oak stands in the Gulf Island National Park Reserve and to Department of National Defence Lands (Rocky Point). These techniques will provide scientists and managers with information and knowledge to apply adaptive management to changing ecosystems in the future. Preliminary results will be presented and will help elucidate our knowledge of Garry oak and dry Douglas-fir ecosystem function and how it may relate to habitat characteristics for species at risk.